

**The mediating effect of organisational
justice mechanisms on the
relationship between leadership and trust**

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Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Philosophy in Corporate Strategy at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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1 February 2021

Abstract

The focus of this research was to build on existing literature of leadership, organisational justice mechanisms and trust. This was done through specific focus on how different kinds of leadership styles, transformational leadership and transactional leadership, effects different types of trust, being affect-based trust and cognition-based trust, as mediated by organisational justice mechanisms, being distributive justice, procedural justice and interactional justice.

To investigate these complex relationships, and given the number of latent constructs proposed, the statistical technique used in this research was partial least squares structural equation modelling (PLS-SEM). This enabled the researcher to evaluate the strength and significance of relationships in this complex model.

Findings showed that distributive justice and procedural justice had no significant mediating effect between leadership style, being transformational leadership and transactional leadership, and the components of trust, being affect-based trust and cognition-based trust. However, it was found that interactional justice had a significant positive mediating effect between transactional leadership and the components of trust, being affect-based trust and cognition-based trust, but not for transformational leadership.

Given the context of the study, these findings further support the notion that it is the responsibility of leaders in an organisation to communicate effectively, clearly and transparently to their followers at all times and, in doing so, increase the level of perceived fairness which will then result in trust being built within the organisation. This in turn will allow employees to put themselves in positions of vulnerability, with the expectation that positive outcomes will be achieved.

Key words: leadership, trust, organisational justice mechanisms, partial least squares structural equation modelling (PLS-SEM), SmartPLS 3

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1. Introduction to the research problem

1.1. Background to the research problem

In the ever-changing environment of business, being able to lead people requires sound leadership, and change management has become the new normal (Carucci, 2019). Technology is fuelling this rate of change, having an astounding impact on the competitive landscape. In such a fast-changing environment, the utility of trust is crucial. It is in these times where organisations which perform above average are those which depend on their leadership to coordinate and motivate followers to optimise the creation of shareholder value. This value is created through ensuring an environment for employees to engage in innovative behaviour, where they go above and beyond what is expected of them and identify with the organisation and its values. This environment cannot be achieved without effective leadership in an organisation (Chamorro-Premuzic & Gallop, 2020).

If one then considers the current context in which leadership is expected to motivate followers to perform at higher levels, one must also consider the leadership styles and attributes that support this positively (Chamorro-Premuzic & Gallop, 2020). One of the critical enablers of effective leadership is the construct of trust. Trust is formed between individuals, as well as between individuals and organisations through demonstrating to team members that you are capable of performing your duties, that you as a leader are authentic and that your followers experience the “real you” and, lastly, that you as the leader care about the people you lead (Frei & Morris, 2020). Furthermore, Rousseau et al. (1998) summarised trust into two parts, the first being a willingness to become vulnerable, which is based on the second part – having positive expectations from others (Rousseau et al., 1998). Moreover, this is of significant interest in the current business context where more and more teams function in a virtual environment with one of the critical success ingredients to this new normal being trust (Ford et al., 2017). It has also been found that certain organisational justice mechanisms mediate the relationship between certain components of trust and leadership; this is a key driver for this research as called for by Ng (2017).

According to the latest Edelman Trust Barometer report, the perception of trust has shifted significantly over the last 20 years (Edelman, 2020). Where the focus in 2001 was on the rising influence of non-governmental organisations, it has now shifted towards “trust at work” in 2019 and “competence and ethics” in 2020 (Edelman, 2020). This dynamism over time also gives insight in terms of how trust is influenced by context, especially given the social nature of trust in society and the workplace. It has been found that the percentage of predictable variance in organisational trust can be explained with 24% by competence, 49% by integrity, 15% by dependability and 12% by purpose, with the last three components being representative of ethics within the organisation (Edelman, 2020). Moreover, it was also found that 92% of people believe that the Chief Executive Officers of their organisations should speak out on critical issues, to build trust (Edelman, 2020). This can be extended to leadership within the organisation, as trust and justice perceptions of employees in an organisation are determined by the attributes and behaviours demonstrated by their leaders in organisations.

Considering the above, the purpose of this research was to create a deeper understanding of what attributes and behaviours of leaders act as enablers and barriers to trust and, in doing so, strengthen or weaken the effect leaderships styles have on trust, mediated by the organisational justice mechanisms. From the review of the literature, it was found that there is limited research in this regard as in most cases the focus has been on the mediating effect of distributive and procedural justice only. For this study, the researcher proposed to include a third mediating justice mechanism – interactional justice. This concept of interactional justice also links to the concept of trust on the basis of transparent exchanges between individuals which is discussed in more detail as part of the literature review (Moorman, 1991).

It was determined that further investigation would be of value to the overall body of knowledge relating to leadership, organisational justice mechanisms and trust. In addition to the gap identified by the researcher, Ng (2017) also indicated that this is an area for further investigation, calling for “*disentangling the effects of different types of justice on different types of trust*” (Ng, 2017, p. 403). Furthermore, this study was conducted within the unique context of South Africa, during a period when COVID-19 played a big role in the way of work, and engagement processes between leaders and followers. The next section focuses on the definition of the research problem as well as the research aim.

1.2. Definition of research problem

As referred to earlier, Ng (2017) recommended further investigation into the components of organisational justice mechanisms and the effect they have on the relationship between leadership and trust in the context of an organisation (Ng, 2017). The researcher was interested in exploring this further in the form of a quantitative study to gain a deeper understanding of the various relationships between leadership, justice mechanisms and trust.

Research has found that transformational leadership improves organisational performance outcomes (Van Knippenberg & Van Kleef, 2016). This relationship between transformational leadership and performance outcomes has also been found to be influenced by several mechanisms (Ng, 2017):

- (i) The affective mechanism which refers to the positive effect transformational leaders have on their followers.
- (ii) The motivational mechanism which talks to the ability of a transformational leader to motivate his or her followers.
- (iii) The identification mechanism which talks to the alignment of values between the transformational leader and his or her followers.
- (iv) The social exchange mechanism which talks to the relationships that form between transformational leaders and their followers.
- (v) The justice mechanism, which talks to the perceived fairness in the allocation of resource within the organisation.

The organisational justice mechanisms and their effect on trust is of specific interest and warrants further investigation as recommended by Ng (2017), because it has been found that only certain types of organisational justice mechanisms influence certain types of trust (Kim et al., 2018; Matta et al., 2020).

Furthermore, given the role of strategic leadership in an organisation in the execution of the organisational strategy, this study would be of specific interest to leadership teams in organisations. Strategic leadership has been conceptualised as leadership at a senior level within the organisation that makes strategic decisions on where and how resources are allocated (Samimi et al., 2020). The aim of this research was, therefore, to explain and create a better understanding of how leadership and organisational justice mechanisms influence trust. As touched on earlier, organisational justice mechanisms are important because they reflect the perceived level of fairness that is maintained in

an organisational context. The level of fairness, in turn, contributes positively to the components of trust as has been found for certain organisational justice mechanisms (Ng, 2017). In doing so, the researcher aimed to extend our knowledge in the area of organisational justice mechanisms and trust, in the context of leadership.

1.3. Main hypothesis

The main research hypothesis for this study was that not all organisational justice mechanisms mediate the effect of transformational and transactional leadership on the components of affect-based trust and cognition-based trust. This was tested using various specific hypotheses, proposed in chapter three, to test the strength and significance of the relationships between certain latent constructs. A theoretical model was proposed by the researcher which was based on the literature review done in chapter two.

1.4. Research aims

The aim of the research was to extend and build on existing theory, using hypothesis testing to test for the strength and significance of relationships between various latent constructs. The latent constructs referred to here are (i) transformational leadership, (ii) transactional leadership, (iii) distributive justice, (iv) procedural justice, (v) interactional justice, (vi) affect-based trust and (vii) cognition-based trust.

1.5. Research contribution

It is important to note that Ng (2017) focused on (i) transformational leadership, (ii) distributive justice, (iii) procedural justice, (iv) distributive justice, (v) trust in the leader and (vi) trust in the organisation. Therefore, the research contribution is in the field of strategic leadership, with the introduction of (i) transactional leadership and (ii) interactional justice and the effect it may have on the components of trust, those being affect-based trust and cognition-based trust. This was done in an effort to build on the work done by Ng (2017), which called for further analysis into why only certain types of justice affect certain types of trust mechanisms.

1.6. Research scope

The research was conducted using a quantitative research methodology, collecting data through an electronic survey distributed via electronic mail. The questionnaire was sent to three prominent organisations in South Africa, comprising 943 individuals in total.

The variables used in this research were: transformational leadership, transactional leadership, distributive justice, procedural justice, interactional justice, affect-based trust

and cognition-based trust. All of these latent constructs were measured using reflective indicators, captured using an electronic survey tool which was distributed using electronic mail. The study was conducted across three organisations based in South Africa. Two of the organisations were mobile network operators and the third organisation was a prominent consulting firm.

1.7. Conclusion

Given the scope of the research as set out above, chapter two focuses on the literature review undertaken to support the assumptions made for the respective hypotheses' tests. The literature review starts with the theoretical foundation of the research, focussing on the norm of reciprocity, Social Exchange Theory and leader-member exchange. The section that follows in the literature review considers the research focus, focusing on two leadership styles: transformational and transactional leadership. This is followed by the three components of organisational justice mechanisms, being (i) distributive justice, (ii) procedural justice and (iii) interactional justice. Lastly, the literature review focuses on the two components of trust: affect-based trust and cognition-based trust.

Chapter three then provides a summary of the research hypotheses as derived from the literature review. This is followed by chapter four which covers the research methodology and research design. Chapter four focuses on elements of the research design and methodology covering, amongst others, the population, the sampling method, the unit of analysis for the study, the measurement instrument in the form of an electronic survey and lastly the data analysis approach used for this study.

Chapter five presents the results, based on the research design and research methodology as set out in chapter four. This is followed by a discussion of the results with the literature review provided in chapter two. The last chapter of this research report focuses on, amongst others, what the theoretical implications are given the results, what the research contribution is and also the implications for management.

2. Literature review

2.1. Theory and literature review

A comprehensive review of the literature was done to gain a deeper understanding of the constructs and variables as discussed briefly in chapter one. The literature landscape has been summarised in the table below and provides an overview of what is discussed in this chapter.

Table 1: A literature overview

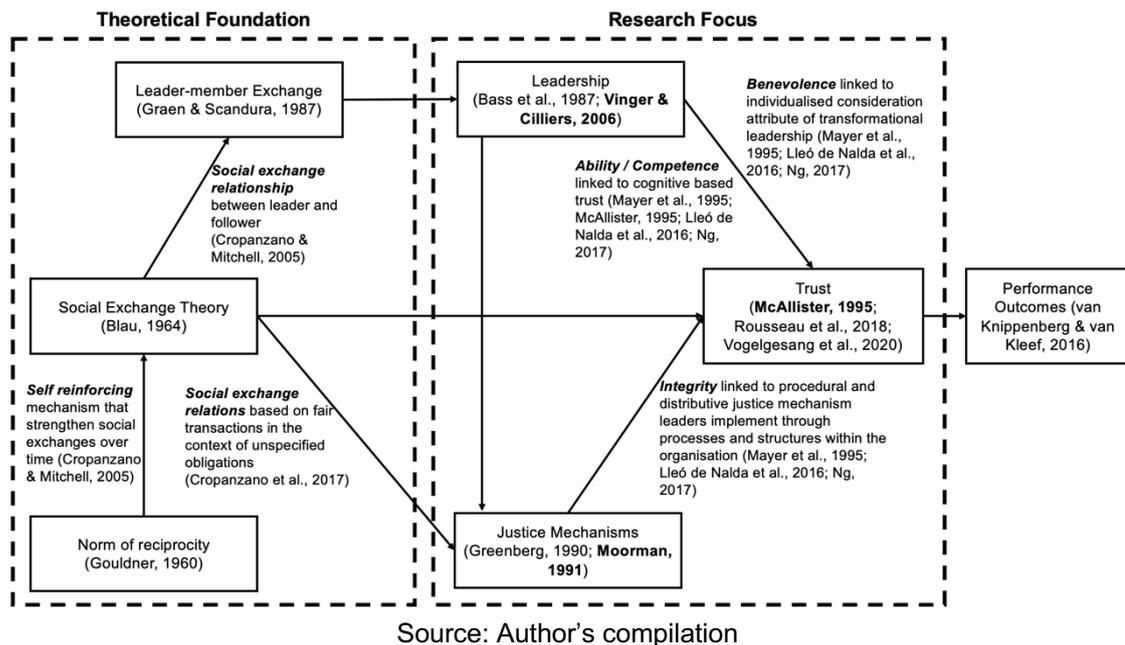
Theoretical Foundation	Research Focus		
	Leadership	Justice mechanisms	Trust
Social Exchange Theory	Transformational leadership	Procedural justice	Enablers of trust
Leader-member exchange	Transactional leadership	Distributive justice	Cognition-based trust
		Interactional justice	Affect-based trust

Source: Author's compilation

The first part of the literature review focuses on the theoretical foundation of the research, first touching on the norm of reciprocity and then delving into Social Exchange Theory and leader-member exchange. The section following covers the latent constructs and observed variables that were measured as part of the research design. This was done to gain a thorough understanding of the various organisational justice mechanisms as well as trust, with the transition between the theoretical foundation and the research focus being leadership. It is important to note that leadership was based on the perception of individuals within the research setting, and organisational justice mechanisms and trust were based on the perception of those individuals relative to the leadership of the organisation.

As an output of the literature review as mentioned above, the following conceptual model is proposed by the researcher to provide insight into the landscape of constructs that act as mediators between leadership and trust.

Figure 1: Conceptual model



2.2. Theoretical foundation

The theoretical foundation focuses on the core constructs underpinning the research focus area, the first of which is the norm of reciprocity on which Social Exchange Theory was built. Following this brief introduction to the theoretical foundation, Social Exchange Theory is considered in detail which then leads into the construct of leader-member exchange, concluding the review of the theoretical foundation.

2.2.1. Social Exchange Theory

Social Exchange Theory has its foundations built on the norm of reciprocity (Gouldner, 1960). The norm of reciprocity which has its roots in social psychology is a principle that has been part of society since the beginning of time and refers to the expectation that what one individual offer another is based on what that individual got offered by the other (Gouldner, 1960). This can refer to the exchange of services, time, material goods and other items perceived as being of value between the individuals. Given the understanding that the norm of reciprocity is built on exchanges between individuals, this then feeds into Social Exchange Theory, for which both these concepts have played a foundational role in the context of employee attitudes and behaviour in a work setting (Jung & Takeuchi, 2019; Settoon et al., 1996).

Blau (1964) went further to develop the theory of social exchange with its roots in sociology, which has become an essential construct used to explain human behaviour in the work context (Cropanzano, et al., 2017; Cropanzano & Mitchell, 2005). Social Exchange Theory can be described as the interdependent actions between people, which in turn are dependent on the actions of the other party. It has been found that Social Exchange Theory plays a foundational role in relationships, as these exchange relationships are built over time between individuals and are visible through trusting and mutual commitments between individuals (Blau, 1964; Cropanzano & Mitchell, 2005). It is important to note that Social Exchange Theory can be considered at two levels, the first being at the organisational level and the second being at the individual level, more specifically the leader-follower dyad (Settoon et al., 1996). For the purpose of this research, the second level of Social Exchange Theory was considered, focusing on the leader-follower dyad, as it was viewed as the perception of the follower relative to that of their leader.

Given the foundational role of the norm of reciprocity and as noted earlier, Social Exchange Theory is based on the exchange of resources. These exchanges of resources can be split into two main groups: i) those of economic value that address financial needs, and ii) those that are socioemotional which refers to one's social and esteem needs (Cropanzano & Mitchell, 2005; Jung & Takeuchi, 2019; Martin et al., 2016; Settoon et al., 1996). It has been found that socioemotional outcomes signal to individuals that they are valued within a certain context, thus supporting the attribute of individualised consideration as part of transformational leadership, discussed later in this chapter (Cropanzano & Mitchell, 2005).

Within the organisational context, social exchange relationships grow stronger over time when employers look after the interests of the employees within the organisation through fair exchange relationships between the parties (Cropanzano et al., 2017; Cropanzano & Mitchell, 2005). This resonates strongly with the organisational justice mechanisms that are discussed later in this chapter and which also forms part of the research focus.

Furthermore, Blau (1964) also noted that social exchange relationships require individuals to trust one another because of the mutual dependency or expectations that are created as a result of the exchange relationship (Blau, 1964). Therefore, an exchange of resources are, in most cases, on the basis that the giving party expects something in return from the receiving party and this ongoing relationship of exchange builds trust over time (Rousseau et al., 2018; Rousseau et al., 1998).

A significant portion of leadership research is based on intra-person mediation models, and for this reason, the study of Leader-Member Exchange Theory also plays an important role (Martin et al., 2018). Leader-member exchange is important because of the exchange relationships that exist between leaders and their followers. A practical example of this would be if an employee performs their job function to a satisfactory level, he/she would be rewarded for that at the end of the month in the form of a salary, linking in well with the contingent reward attribute of transactional leadership.

Furthermore, where low levels of leader-member exchange are present, the leader-follower relationship is very much task performance orientated. In cases of high leader-member exchange, high levels of trust, interaction and support are present (Martin et al., 2018). Furthermore, these levels of leader-member exchange resonate well with the attributes of transactional and transformational leadership which is discussed in more detail later as part of the research focus. Given that leadership can be seen as a relationship between individuals, the section that follows delves into this construct of leader-member exchange. This is of specific interest for this research, given the mediating effect of organisational justice mechanisms that reflect a level of fairness, given the economic and socioemotional exchanges that exist between leaders and followers.

2.2.2. Leader-member exchange

Leader-member exchange theory is built on Social Exchange Theory and refers to the dyadic relationship that forms and exists between a leader and a follower, focusing on leadership as a relationship-based approach (Dansereau et al., 1975; Graen & Scandura, 1987; Graen & Uhl-Bien, 1995; Ng, 2017; Schriesheim, Castro, & Cogliser, 1999). This theory talks to the relationship that exists between the leader and the follower, for which the quality of this relationship is built on the type of behaviours the leader exhibit towards the follower (Dansereau et al., 1975; Martin et al., 2018; Ng, 2017).

This is a necessary construct to consider as part of the theoretical foundation because it has been found that trust between people is a function of two elements, the first being affect-based trust and the second being cognition-based trust, with affect-based trust being dependant on the quality of relationships formed between the individuals (McAllister, 1995). Therefore, this then also resonates in the context of trust, considering that the social-psychological foundations of trust are based on the principle of

understanding an individual's behaviour within a social context (Johnson-George & Swap, 1982).

Furthermore, leader-member exchange differentiation is another important component of leader-member exchange. Leader-member exchange differentiation refers to the different levels of relationships that exist between leaders and followers within an organisational context (Martin et al., 2018). The result of these differentiated exchange relationships then also influences the amount of resources allocated to certain individuals (Martin et al., 2018; Yu et al., 2018), which in turn supports the notion of distributive and procedural justice and the continuum that exists between transformational leadership and transactional leadership, which would be considered as part of the research focus.

Two methods of allocating resources in the context of leader-member exchange differentiation are found in the literature: the equity principle and the equality principle. The equity principle supports team performance and is based on allocating resources that motivate resources to perform at optimum levels (Yu et al., 2018). The equality principle, in turn, supports team harmony and unity. The equality principle assumes resources are allocated equally between all team members (Yu et al., 2018). For the purpose of this research, only the equity principle was considered, given the support it provides to the construct of distributive and procedural justice as referred to earlier (Martin et al., 2018).

2.3. Research focus

This section focuses on the latent constructs that are evaluated in depth as part of the research focus. The first section looks at the two main types of leadership styles – transformational and transactional leadership – followed by the three organisational justice mechanisms. The three organisational justice mechanisms discussed in detail below are (i) distributive justice, (ii) procedural justice, and (iii) interactional justice. The last part of the research focus reviews the literature as it relates to trust, specifically (i) cognition-based trust and (ii) affect-based trust.

2.3.1. Leadership

Leadership has been the focus of research for decades, and in the 1980s it shifted to two main streams of focus – transformational and transactional leadership (Bass et al., 1987). The effect that leadership has on followers is achieved through certain behaviours exhibited by leaders over a period of time (Bass et al., 1987). Those behaviours can be

adjusted by the leader, given the context within which the leader is expected to lead, also noted as the transformational and transactional leadership continuum (Vinger & Cilliers, 2006). The next section delves into latent constructs of transformational and transactional leadership.

2.3.1.1. Transformational leadership

The difference in transformational and transactional leadership was first studied and theorised by Burns during 1978 and then expanded on by Bass during 1985 (Bass et al., 1987). The study made use of the multifactor leadership questionnaire, that takes 50 statements to evaluate the behaviours of leaders. Five main areas of focus were identified as part of this, with ten statements covering each of the main focus areas, or “components” as explained below (Bass et al., 1987). Three components relate to transformational leadership, and two to transactional leadership.

The first component was charismatic leadership, which is perceived by followers through the behaviours exhibited by the leader. These behaviours would result in followers gaining an understanding of the mission of the organisation, instilling a sense of pride in followers as well as building loyalty towards the leader. Ng (2017) and others went further to split the construct of charismatic leadership into two components, the first being idealised influence, affecting strong emotions in followers, and the second being inspirational motivation, the ability to articulate the importance of the organisational goals to the followers (Ng, 2017; Vinger & Cilliers, 2006).

The second component identified was that of individualised consideration and this attribute talks to behaviours of leaders that demonstrate to their followers that they really care about their employees through listening to what they need on an individual level (Bass et al., 1987; Ng, 2017). The third component identified was that of intellectual stimulation and this component talks to the ability of a leader to motivate followers to find new and better ways of performing organisational tasks, as well as looking at problems in new ways (Bass et al., 1987; Ng, 2017). The behaviours of leaders that support these first three attributes, being charismatic leadership, individualised consideration and intellectual stimulation, are taken together as a measurement of the level of transformational leadership of a specific leader (Bass et al., 1987).

As mentioned in chapter one, the study of Ng (2017) only focused on transformational leadership. For the purpose of this research, it was decided to also include transactional leadership, given that leaders operate on a continuum between transformational and

transactional leadership most of the time (Vinger & Cilliers, 2006). The amounts of transformational leadership and transactional leadership portrayed by effective leaders are adjusted according to the context in which they operate, at a specific point in time (Oc, 2018). By including transactional leadership as the next latent construct, the researcher aims to extend on the findings of Ng (2017) and in so doing, further contribute to theory development.

2.3.1.2. Transactional leadership

The fourth component considered was that of contingent reward, which is manifested through leadership behaviours that tell followers what to do and also linking specific financial rewards to delivering specific tasks (Bass et al., 1987). The fifth and final component considered was that of management-by-expectation and this attribute talks to leadership behaviour that reinforces tried and tested ways of performing tasks, typically not open for change in process and stuck in ways of doing things (Bass et al., 1987). These last two components, when considered together, indicate the level of transactional leadership behaviour exhibited by the leader.

As mentioned before, Social Exchange Theory is based on the exchange of resources and can be split into two main groups, firstly those of economic value that address financial needs, and secondly those that are socioemotional which refers to one's social and esteem needs (Cropanzano & Mitchell, 2005; Jung & Takeuchi, 2019). Therefore, it is proposed to group the exchange of economic resources with that of transactional leadership and socioemotional resources with that of transformational leadership. As described earlier, an exchange of resources is in most cases on the basis that the giving party expects something in return from the receiving party and this ongoing relationship of exchange builds trust over time (Rousseau et al., 2018, 1998). The elements of trust are discussed in the sections below.

It is important to note that the amount of transformational versus transactional leadership and the effectiveness thereof, also known as adaptive leadership (Bass et al., 2003), are very much dependant on the context in which leaders exhibit those leadership behaviours (Antonakis et al., 2003; Bass et al., 1987; Tepper et al., 2018; Uhl-Bien & Arena, 2018). It has been found that transformational leadership is especially effective at times of uncertainty (Tepper et al., 2018).

Furthermore, other important outcomes of transformational leadership can explain the effectiveness of transformational leadership during times of uncertainty, those being:

- (i) Intrinsic motivation of followers.
- (ii) Improved creativity in the work context for followers.
- (iii) **Improved levels of trust between leader and followers** (bold added).
- (iv) A feeling of empowerment and self-efficacy experienced by followers of transformational leaders.
- (v) Organisational commitment from followers to the organisation within which they function (Koh et al., 2019; Tepper et al., 2018).

It is also important to note that transformational leadership is a positive leadership style employed by leaders that, through their behaviours, influences followers to go above and beyond their own needs to fulfil the needs of the organisation (Gui et al., 2020; Hoch et al., 2018; Siangchokyo et al., 2020; Tepper et al., 2018).

In addition to transformational and transactional leadership, in recent years a significant number of leadership styles have been identified and researched. As part of these studies, it has been found that both authentic and ethical leadership shows very little incremental change to outcomes as measured compared to outcomes of transformational leadership (Hoch et al., 2018), with the link of ethical leadership back to transformational leadership being made through the effect of idealised influence (Anderson & Sun, 2017). Therefore, as noted here, few of the new leadership styles provide additional insight into the effect they have on the relationship between leaders and followers. For this reason, other forms of positive leadership styles, such as authentic and ethical leaderships, were not considered as part of this research. The research instead focused on the balance of transformational and transactional leadership within the context of the study.

2.3.2. Organisational justice mechanisms

This next section focuses on the organisational justice mechanisms as latent constructs within the literature. Organisational justice mechanisms have been built on Equity Theory as well as Uncertainty Management Theory and were later extended to fairness (Matta et al., 2017). Equity Theory refers to perceived fairness of treatment experienced by individuals (Moorman, 1991). Furthermore, organisational justice refers to the role of fairness, as experienced in an organisation (Moorman, 1991).

In general, organisational justice has been argued to be a single construct of evaluation in the context of organisations. However, heeding the call from Ng (2017), when delving deeper into the literature, it has been found that organisational justice can be broken

down into four elements (Colquitt, 2001). These four elements within the organisational justice mechanism has been identified as: procedural justice, distributive justice interpersonal justice and interactional justice (Matta et al., 2017; Ng, 2017).

However, research has focused mainly on procedural and distributive justice mechanisms (Ng, 2017). It is recommended that interactional justice be included as part of this research, heeding the call of Ng (2017) to delve deeper into the relevant components of organisational justice mechanisms. Colquitt (2001) argued that interpersonal justice can also be seen as part of procedural justice, given that it leans toward the process being followed in the allocation of resources as perceived by the individuals in the organisation (Colquitt, 2001). For this reason, interpersonal justice was not added as a mediating latent construct.

It is important to note that organisational justice mechanisms are measured at an organisational level and in the context of this study, the perception of individuals was evaluated in terms of how they perceive these mechanisms to be implemented by the leadership of the organisation, in essence aligning the unit of analysis across all latent constructs. As mentioned earlier, there exists a strong link between organisational justice mechanisms and the tenets of Social Exchange Theory, in that social exchange relationships are strengthened through fair treatment between individuals (Cropanzano et al., 2017; He et al., 2014; Rubenstein et al., 2019; Tepper et al., 2018). The next three subsections touch on distributive, procedural and interactional justice.

2.3.2.1. Distributive justice

The distributive justice mechanism refers to the fairness of the process followed, through which the allocation of resources is done (Greenberg, 1990; Matta et al., 2017). Furthermore, it has been noted that an employer is expected to deliver on certain resources, so as for employees to perform their functions and in doing so also strengthen the psychological trust between employees and the organisation (Rousseau et al., 2018).

Another dimension of distributive justice, and how that positively impacts the relationship between leaders and followers as a result of fair treatment, can be explained by the group value model (Fulmer & Ostroff, 2017; Tyler et al., 1996; Tyler, 1989). The group value model suggests that followers perceive fair treatment as symbolic value and that it signals one's worth within the organisation, which in turn motivates followers to work harder and expend more effort to deliver on the tasks that the leader sets out for them (Ng, 2017).

It can therefore be hypothesised that distributive justice has a strong mediating effect between the components of leadership, be that transformational or transactional leadership, and the components of trust, being cognition-based trust and affect-based trust. This is supported by trust being strengthened if treatment is seen to be fair between leaders and followers (Rousseau et al., 2018).

2.3.2.2. Procedural justice

The procedural justice mechanism has been described as the process used to decide where to allocate resources within the organisation (Fulmer & Ostroff, 2017; Matta et al., 2017; Ng, 2017). Procedural justice also links into strategic leadership because leaders are seen to be in positions where they are empowered and expected to make decisions on how and where organisational resources are deployed (Samimi et al., 2020). It can be argued that this allocation of resources takes place at all levels of leadership in an organisation; however, the magnitude of such resource allocations increases the higher you move in the organisation.

Furthermore, it has been found that transformational leaders uphold high ethical standards, which in turn support the notion of fair resource allocation within the context of the organisation (Ng, 2017). It can therefore be hypothesised that procedural justice has a strong mediating effect between the components of leadership, be that transformational or transactional leadership, and the components of trust, being cognition-based and affect-based trust.

Interactional justice is a sub-category of procedural justice (Moorman, 1991) and leans more towards the interactions between people in the context of the organisation. Given that trust can be described as a position of being vulnerable in the expectation of positive outcomes (Rousseau et al., 1998), it is proposed that interactional justice be added as a third mediating variable between leadership and trust. The next section in the literature review therefor focuses on interactional justice.

2.3.2.3. Interactional justice

Interactional justice refers to the appropriateness and truthfulness of the information shared, so as to justify the allocation of resources and process followed in this allocation. Put another way, interactional justice considers the fairness of the manner in which procedures are implemented, with the focus of this implementation being on the leader, and not so much the organisation (Moorman, 1991). This manner in which procedures

are implemented by leaders is also supported by truthfulness and justification (Colquitt & Rodell, 2011; Colquitt & Zipay, 2015). The focus of research to date has mainly been around distributive and procedural justice mechanisms, but it is suspected that interactional justice would also be a key latent construct to consider for the purpose of this research.

This concept of interactional justice then also links into the concept of trust on the basis of transparent exchanges between individuals. As will be seen in the next section, trust is the willingness to be vulnerable whilst not having all the information at hand in the leader-follower dyad (Rousseau et al., 1998). Another reason why interactional justice is of interest is because it functions at an individual level, between leaders and followers, whereas, distributive and procedural justice mainly functions at an organisational level (Moorman, 1991). In doing so, this research is aiming to extend on the theory proposed by Ng (2017) by introducing a third component of organisational justice as a mediating variable between leadership and trust.

It is therefore hypothesised that interactional justice has a strong mediating effect between the components of leadership, being transformational leadership and transactional leadership, and the components of trust, being cognition-based trust and affect-based trust.

2.3.3. Trust

The next section of the literature covered in this chapter on trust and the various constructs that make up trust in the context of this study. The definition of trust as proposed by Mayer et al (1995) is: “[T]he willingness of a party to be vulnerable to the 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” (p. 712).

Furthermore, in recent years, trust has also been defined as the willingness of one individual to expense effort, expecting that it will be reciprocated by another individual, without any firm commitment of such (Mozumder, 2018). It can therefore be argued that given the organisational justice mechanisms discussed earlier, these organisational justice mechanisms can be viewed as measurements of perceived fairness. This perceived fairness would in turn increase the likelihood of individuals to put themselves in a vulnerable position, whilst expecting a positive outcome.

2.3.3.1. Enablers of trust

One of the most cited articles on trust is that of Mayer et al. (1995). In this piece of work, the authors refer to three enablers of trustworthiness: ability, benevolence and integrity (Alarcon et al., 2018; Costa et al., 2018; Mayer et al., 1995; Schoorman et al., 2007). It is important to note that trustworthiness is based on the perceptions of the trustor, relevant to the trustee (Alarcon et al., 2018).

Ability can be seen as a certain set of skills an individual has that enables him or her to perform a function in a specific context (Lleó de Nalda et al., 2016; Mayer et al., 1995). As will be seen in the next section, one can potentially argue that the foundation of this would be cognition-based trust as explained by McAllister (1995). The next enabler of trust is that of benevolence which can be seen as *“the extent to which a trustee is believed to want to do good to the trustor, aside from an egocentric profit motive”* (Mayer et al., 1995, p. 719). In the context of transformational leadership behaviours, this resonates with the attribute of individualised consideration, where a transformational leader attends to the individual needs of followers, acts as their coach as well as listens to their concerns (Ng, 2017).

The last enabler of trust as set out by Mayer et al. (1995) is that of integrity. Integrity is conceptualised as the trustor believing that the trustee conforms to a certain set of principles and values that are acceptable to the trustor (Lleó de Nalda et al., 2016; Mayer et al., 1995). This concept of integrity resonates well with the organisational justice mechanisms as defined earlier because these mechanisms are seen as measures of fairness between the parties, which ultimately support the perceived integrity between those individuals.

Furthermore, propensity to trust is another antecedent to trust. Propensity to trust refers to an individual's tendency to trust others, irrespective of the having any proof that someone is trustworthy (Alarcon et al., 2018). The final antecedent to trust is that of trust actions. Trust actions are built on Social Exchange Theory, as referenced earlier, with specific focus on the relevant acts performed between the trustor and the trustee. The exchange of such trust actions ultimately results in reciprocal trust between the trustor and the trustee (Alarcon et al., 2018). The next section focuses on two components of trust as identified in the literature, those being affect-based trust and cognition-based trust (McAllister, 1995).

2.3.3.2. Cognition-based trust

Cognition-based trust can be described as a measure of peer reliability and dependability (Costa et al., 2018; McAllister, 1995). This measure of peer reliability and dependability is built on the items such as the experience of the relevant peer and their qualifications (Dirks, 2000; Kim et al., 2018; McAllister, 1995). It is sometimes also linked to the position the individual holds within the organisation (Kim et al., 2018), and is therefore important in the leader-follower dyad as typically the follower will report to the leader.

Furthermore, it has also been found that trust, in general, is built up between individuals over time (Rousseau et al., 1998). For this reason, it is expected that the various organisational justice mechanisms have a positive mediating influence between leadership and trust, given that it is representative of fair exchanges between leaders and followers over time. One can therefore argue that this will increase the likelihood of individuals to put themselves in a position of vulnerability, trusting each other.

Furthermore, the reason why cognition-based trust plays an important role in the relationship between leadership and trust can be supported by Mayer et al. (1995) when considering the enablers of trust as discussed earlier, one being the ability of the leader as perceived by the follower. For this reason, cognition-based trust was included as a latent measurement construct for trust, which could enable the researcher to measure the mediating effect that organisational justice mechanisms have between leadership and cognition-based trust.

2.3.3.3. Affect-based trust

Affect-based trust is found and built on reciprocated interpersonal care between individuals (McAllister, 1995; Vogelgesang et al., 2020). This can also be described as mutual trust between persons defined as the combination of felt trust (the measurement of trust felt by the follower and offered by the leader) and trust in the leader (a measurement of follower trust in the leader) (Kim et al., 2018; Rousseau et al., 1998). It is also important to note that cognition-based trust is needed for affect-based trust to be built between individuals (McAllister, 1995).

Therefore, affect-based trust plays an important role in the relationship between leadership and trust, which can be supported by Mayer et al. (1995) when considering the enablers of trust, another being the benevolence of the leader as perceived by the follower. For this reason, affect-based trust was included as a latent measurement

construct for trust, which could enable the researcher to measure the mediating effect that organisational justice mechanisms have between leadership and affect-based trust.

2.4. Performance outcomes

Performance outcomes did not form part of this research because it has already been shown that transformational leadership and trust as mediated by organisational justice mechanisms have a positive impact on employee performance (Ng, 2017; Van Knippenberg & Van Kleef, 2016). However, it is still important to note that the outcomes of these behaviours within the organisational context can be measured on three fronts, the first being task performance. Task performance can be described as the measurement of the effectiveness with which an employee performs their work tasks, and in doing so, contributes to the core capabilities of the organisation (Ng, 2017; Van Knippenberg & Van Kleef, 2016).

The second performance outcome is organisational citizenship behaviours which talks to how many extra-role activities an employee participates in. These extra-role activities can be described in terms of when employees go above and beyond what is expected of them to deliver on what is important for the organisation (Ng, 2017; Van Knippenberg & Van Kleef, 2016). This then also goes further to influence the psychology of feeling a sense of belonging towards the organisation which in turn contributes to the collective identification of employees within the organisation (Horstmeier, Boer, Homan, & Voelpel, 2017).

The third performance outcome is innovation behaviours which refers to individuals feeling valued and trusted, which then results in them being open to experiments and to come up with new and better ways of performing tasks in the organisation (Ng, 2017; Van Knippenberg & Van Kleef, 2016).

As noted earlier, performance outcomes did not form part of this study, as this has been validated in multiple studies already (Ng, 2017; Van Knippenberg & Van Kleef, 2016). The focus of this research was rather on the mediating effect of organisational justice mechanisms between leadership and trust.

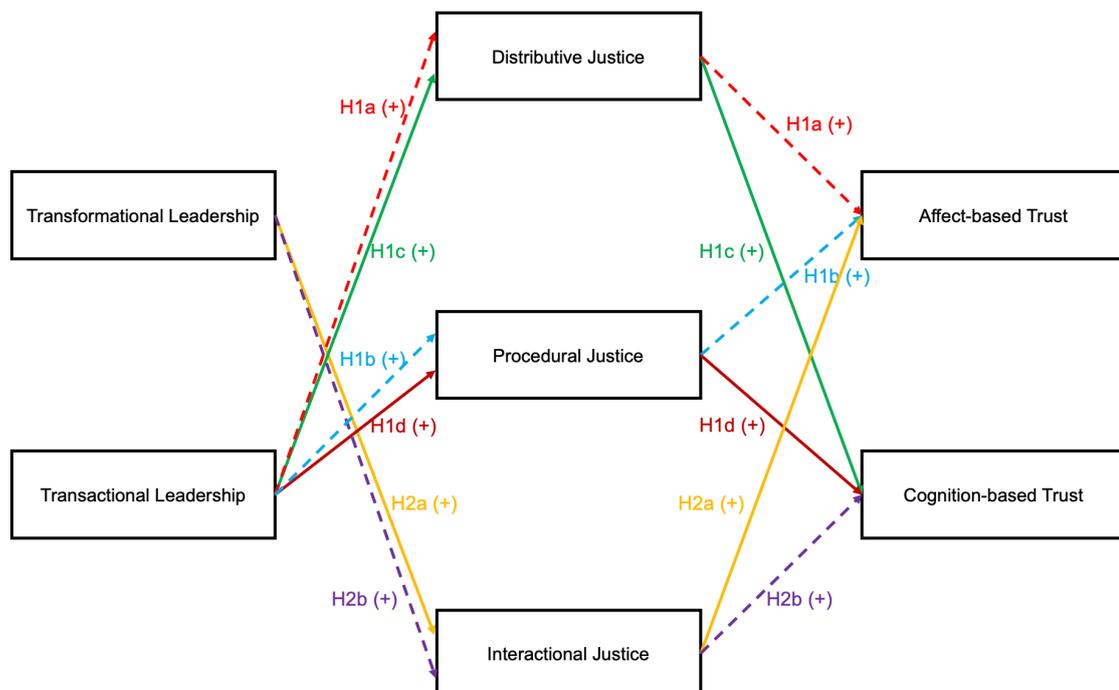
2.5. Conclusion

The literature review found that there would be a difference in the strength of relationships between leadership styles and their effect on the three organisational justice mechanisms explained above and the two components of trust. Heeding the call

of Ng (2017), the research design and research methodology to follow aimed to support the hypotheses as set out in chapter three below. This is further supported by the fact that, given the findings of the analysis done as part of the theoretical foundation of this study, Social Exchange Theory and leader-member exchange is a good fit for this study. This is because the components of the organisational justice mechanisms are predicated on the fair exchange of resources, be that social or economic exchanges.

This can further be summarised in the model below, indicating the relationship and the effect it has between the various constructs as discussed. Note that the mediating paths are shown in different colours. This was done so as to help the reader to differentiate between the multitude of relationships as discussed above.

Figure 2: Model showing the hypotheses



Certain relationships are not indicated in the above model. Given the number of relationships, if all had to be drawn, the diagram would become unclear. Therefore, existing relationships that are expected to exist, based on the research done by Ng (2017) and others, are not included in the model. In an effort to build on existing theory, only those that were tested with hypothesis testing have been shown in the proposed model.

Chapter three that follows discusses the above hypotheses in more detail, focusing on the relationships, as they are hypothesised to exist based on the literature review done.

3. Research hypotheses

3.1. Introduction

The research was designed to extend and build on the work done by Ng (2017), who called for further investigation into why only certain types of organisational justice mechanisms mediate certain types of trust. With this in mind, two latent constructs were introduced to the model, not previously considered by Ng (2017).

The work done by Ng (2017) focused on the mediating effect that distributive and procedural justice had between the independent variable of transformational leadership and the dependant variables of (i) trust in the leader and (ii) trust in the organisation (Ng, 2017). The first latent construct that was introduced, in addition to the mentioned latent constructs for this study, was transactional leadership. Transactional leadership was added as a second independent variable. The second latent construct that was introduced into the research was the mediating latent construct of interactional justice. As noted earlier, interactional justice being a subset of procedural justice (Moorman, 1991).

Furthermore, because it was found from the literature review that trust is mainly driven as a between person effect, with even trust in the organisation being effected by individuals, it was decided to consider the two latent constructs that make up trust, those being affect-based trust and cognition-based trust (McAllister, 1995).

Therefore, the hypotheses for testing were categorised into two main themes, the first being the introduction of transactional leadership, and the second being the introduction of interactional justice, with affect-based trust and cognition-based trust being the dependant latent constructs proposed. The proposed hypotheses that follow were structured based on this design.

3.2. Research hypotheses

The next section calls on key findings from the literature review that may explain the presence of relationships between latent constructs as well as potential mediating constructs that support such relationships.

3.2.1. Research hypothesis 1

Given the attribute of contingent reward for transactional leadership and the nature of distributive and procedural justice, which considers fair allocation of resources and the process followed for that allocation, it is therefore expected that both distributive and

procedural justice will have a positive mediating effect on both components of affect-based trust and cognition-based trust. It was therefore hypothesised that:

H1a: Distributive justice has a positive mediating effect between transactional leadership and affect-based trust.

H1b: Procedural justice has a positive mediating effect between transactional leadership and affect-based trust.

H1c: Distributive justice has a positive mediating effect between transactional leadership and cognition-based trust.

H1d: Procedural justice has a positive mediating effect between transactional leadership and cognition-based trust.

3.2.2. Research hypothesis 2

Given the attribute of individualised consideration for transformational leadership and the nature of interactional justice, which considers fairness of the manner in which resources are allocated by leaders, it is therefore expected that interactional justice will have a positive mediating effect on both components of affect-based trust and cognition-based trust. It was therefore hypothesised that:

H2a: Interactional justice has a positive mediating effect between transformational leadership and affect-based trust.

H2b: Interactional justice has a positive mediating effect between transformational leadership and cognition-based trust.

3.3. Conclusion

Given the proposed hypotheses for testing, as set out in this chapter, the next chapter focuses on the research design and research methodology that was implemented to test for the strength and significance of these relationships.

4. Research design and methodology

4.1. Introduction

This section covers the research method that was implemented, as well as the design thereof. The research philosophy, also referred to as the worldview, adopted for this study was positivist in nature (Bagozzi, 2011; Creswell & Creswell, 2018). The phenomenon studied by positivism are by nature focused on the causes of certain outcomes (Bagozzi, 2011; Creswell & Creswell, 2018). In the context of this research, trust would be the outcome as a result of the two leadership styles, transformational and transactional leadership, as mediated by the three organisational justice mechanisms, being distributive, procedural and interactional justice.

Given the gap that has been identified in the literature – why only certain types of organisational justice mechanisms mediate the effect of leadership on certain types of trust, and building on the call from Ng (2017) to delve deeper into this phenomenon – a quantitative study was conducted to test the strength and significance of the relationships between leadership and trust and the mediating effect that organisational justice mechanisms may have on it (Creswell & Creswell, 2018). The organisational justice mechanisms chosen as mediating variables for this research were chosen firstly based on the call from Ng (2017) for further investigation and secondly, because of the critical role that leadership plays in the organisational context, implementing measures to build sustainable organisations. The next section covers the research design, population and setting, sampling, unit of analysis, measurement and lastly the limitations of the study.

4.2. Research design

The aim of the research was to test for the strength and significance of the relationships between latent constructs to understand why certain components of organisational justice mechanisms effect certain components of trust, which in turn, influences the effect that leadership has on employee performance. A nonexperimental design was used in the form of existing published survey questionnaires to test for and explain the relationships between the constructs as proposed (Creswell & Creswell, 2018). This was achieved by using the hypotheses as set out in chapter three, and testing them against the data collected, either rejecting or failing to reject the respective hypotheses based on the strength and significance of the relationships found in the proposed structural model (Creswell & Creswell, 2018; Hair et al., 2011).

The independent variables for the proposed study were transformational and transactional leadership, also known as the exogenous variables in structural equation modelling (Hair et al., 2020). Exogenous variables do not have any path relationships pointing towards them (Hair et al., 2011). Furthermore, the mediating variables considered were the components of the organisational justice mechanism and the effect that had on the components of trust, the dependant variables, also known as the endogenous variables in structural equation modelling (Hair et al., 2020).

Endogenous variables have path relationships pointing towards them and potentially also from them to other endogenous variables (Hair et al., 2011). It is important to note that the mediating variables, being the components of the organisational justice mechanism in this case, predict the strength of influence between the independent and dependant variables (Creswell & Creswell, 2018; Hair et al., 2017). The purpose of the study was therefore to explain the relationship between leadership, organisational justice mechanisms and trust, with the aim to extend on the theory in this regard, as pointed out by Ng (2017), calling for further analysis into why only certain components of organisational justice mechanisms influence certain components of trust (Ng, 2017).

The various hypotheses derived from the literature above were tested using the data collected from individuals across multiple organisations, by making use of an untimed, online questionnaire. Due to the complex relationships that exist between the various latent constructs, the statistical method used was structural equation modelling (SEM), more specifically partial least square SEM (PLS-SEM), as the statistical analysis technique to test for and validate the strength and significance of the relationships between the various latent constructs (Hair et al., 2020, 2011; Hooper et al., 2008).

PLS-SEM is also referred to as variance-based SEM, maximising the explained variance between the endogenous variables within a path model (Hair et al., 2020; Shmueli et al., 2019). If the research focus is prediction and theory development, PLS-SEM is better suited than CB-SEM, with CB-SEM being more suitable for confirming the relationships between latent variables (Hair et al., 2011). Given the nature of the gap identified in the current literature, why only certain components of organisational justice mechanisms affect certain components of trust as called for by Ng (2017), which results in a complex model of interrelated latent constructs, it was fitting that the analytical approach for this research was selected as PLS-SEM.

Structural equation modelling is a statistical technique that can also be used to reduce the number of observed variables into a smaller amount of latent variables; this is achieved through observing the amount of covariation that exists between the observed variables (Hair et al., 2020; Schreiber et al., 2006). Furthermore, structural equation modelling is a very good process to measure the mediating effects of variables. Given that the aim for this research was to measure the effect that organisational justice mechanisms have on the relationship between leadership and trust, it further supported the selection of PLS-SEM as the statistical method of analysis for this research (Cheung, 2007; Hair et al., 2011; Schreiber et al., 2006).

In the context of structural path models, the inner model refers to the paths that exist between the latent constructs that were evaluated using PLS-SEM. Because the indicator variables that represent the latent constructs are reflective in nature, the outer loadings were considered as a measurement of how accurately the indicator variables reflected the measured latent construct, also known as a Mode A measurement model (Hair et al., 2011). The latent constructs for this study were:

- (i) Transformational leadership.
- (ii) Transactional leadership.
- (iii) Procedural justice.
- (iv) Distributive justice.
- (v) Interactional justice.
- (vi) Cognition-based trust.
- (vii) Affect-based trust.

The exogenous latent constructs for the path model were transformational and transactional leadership. Exogenous latent constructs are latent constructs that don't have any structural paths pointing towards them (Hair et al., 2011).

On the other hand, endogenous latent constructs are explained by other latent constructs via the path models as referred to earlier (Hair et al., 2011). The endogenous latent constructs for the statistical analysis performed included procedural justice, distributive justice and interactional justice and the mediating effect these organisational justice mechanisms had on cognition-based trust and affect-based trust. The outer model of the structural model are the measurements, also known as the observed variables, used to measure the various constructs that are outlined here (Hair et al., 2011). In total, 47 observed variables were measured, making up seven latent constructs. The details for

each of the latent constructs and their respective observed variables are discussed in more detail below.

The findings from the structural equation modelling were compared with the conceptual model as outlined in chapter two of this research report. From the analysis that followed, the researcher aimed to explain why only certain types of organisational justice mechanisms mediate certain types of trusts in the context of transformational and transactional leadership.

As stated earlier, a research questionnaire was used to gather data electronically. The data collected was then used to measure the constructs being considered as part of the study. Even though the questions were adapted from existing published literature, it was prudent that Cronbach's alpha be measured for each latent construct to ensure the reliability of the measurements (Hair et al., 2020; Tavakol & Dennick, 2011). This was necessary given the change in temporal and spatial context in which the measurements were initially deployed. Reliability of a research questionnaire can be defined as the ability of the questionnaire to measure consistently (Tavakol & Dennick, 2011). As context, time and space varies, it is important to reconfirm Cronbach's alpha for all latent constructs, even if the published literature reports an acceptable value for that specific set of questions.

A Cronbach's alpha result of at least 0.65 was required as a measurement of reliability for the research questionnaire (Bonett & Wright, 2015), with optimal values ranging from 0.7 to 0.9 (Creswell & Creswell, 2018; Hair et al., 2020). If Cronbach's alpha was less than 0.65, Statistical Package for Social Sciences (SPSS) (Ringle, Wende, & Becker, 2015) could have been used to determine which of the questions could potentially be removed and in doing so, improve the reliability of the measured construct, as long as validity is maintained. In addition to reliability, construct validity was also measured as mentioned earlier (Creswell & Creswell, 2018). Construct validity is a measurement of the ability of a questionnaire to measure what it is supposed to measure (Tavakol & Dennick, 2011). These elements of analysis are discussed in more detail below.

The next section considers the population and setting for the proposed study.

4.3. Population and setting

A population is a “*well defined collection of units*” (Bonett & Wright, 2007, p. 648). The population for this study included all junior, middle, senior and executive management members of three prominent organisations in South Africa, consisting of 943 individuals. This population was selected because the study aimed to investigate how the perception of organisational justice mechanisms implemented influences trust, as exhibited by the leadership and perceived within the organisation. This was then achieved through capturing the perceptions of individuals, relevant to their leadership in the organisations in which they work.

These perceptions of the population were proposed because it has been found that strategic leadership is a function of the position the individual holds within the organisation as well as the ability of such leaders to direct resources within the organisation (Samimi et al., 2020). Given that the population consisted of management staff across the organisations, the magnitude of resources that could be directed would change relative to the management level of those individuals in the organisations.

Furthermore, strategic leadership also links well with the organisational justice mechanisms as strategic leaders determine policies and procedures of how resources are allocated within the organisation as well as motivating and influencing followers (Samimi et al., 2020). This explains the relevance of selecting this population for this study, noting that the magnitude of such resource allocation would vary across the management levels within the organisation. This was a multi-dimensional study because the sample was taken from across various departments and organisations, together with the various leadership styles exhibited by the leadership throughout those organisations.

4.4. Sampling

A random sampling method was implemented for this study (Creswell & Creswell, 2018). This was achieved by sending the questionnaire electronically to the entire population, giving every respondent an equal opportunity to respond which would result in a probabilistic sample (Creswell & Creswell, 2018). With sufficient responses, the results gathered from the sample, could then be generalised to the rest of the population (Creswell & Creswell, 2018). Access to the relevant employees within the organisations was facilitated through existing professional relationships.

4.5. Unit of analysis

The unit of analysis for the research was the individual member of the junior, middle, senior and executive management teams. As mentioned before, because organisational justice mechanisms are enforced at an organisational level, the research questionnaire was used to measure the perception of various organisational justice mechanisms as perceived by individual members to align the unit of analysis with the other constructs for the study.

The leadership constructs used in this research were measured reflectively and were based on the perception of the follower, relative to the leader. This same relationship between the follower and leader was also used to measure the perception of affect-based trust and cognition-based trust. In doing so, the unit of analysis across the entire research project was aligned to the individual respondents.

4.6. Measurement

As part of the research questionnaire, some demographic data of the respondents were gathered to confirm the relevance of the specific participant in the study. As per of the proposed quantitative study, numeric data was collected on an interval Likert scale which in turn was appropriate for the research design as outlined earlier (Schreiber et al., 2006).

The questionnaire was sent out electronically by making use of electronic mail. One of the key success factors of such a quantitative study was to ensure a high response rate (Creswell & Creswell, 2018). The following initiatives were implemented to ensure a high as possible response rate.

1. The first communication was a short message to the participants to provide them with background to the proposed research (Creswell & Creswell, 2018; Mozumder, 2018).
2. The second communication was the actual survey request, one week after the first communication (Creswell & Creswell, 2018; Mozumder, 2018).
3. The third communication was a follow up sent to all participants, four to eight days after the second communication (Creswell & Creswell, 2018; Mozumder, 2018).

4. The fourth communication was a final follow up sent to all participants about three weeks after the second communication (Creswell & Creswell, 2018; Mozumder, 2018).

The aim of proposed administration process as set out above was to increase the response rate as well as complete the data collection portion of the study within an acceptable timeframe (Creswell & Creswell, 2018; Mozumder, 2018). Furthermore, the data collected via the questionnaire is stored electronically for a period of no less than ten years (Creswell & Creswell, 2018). Another benefit of this design was that, because the questionnaire was administered electronically, participants could complete the survey at their own time, when convenient. In so doing, the likelihood of a higher response rate was improved.

4.7. Measurement instrument

This next section focuses on the measurement instrument used, how it was constructed as well as the pretesting that was done with a test sample with the aim of improving the instrument.

4.7.1. Questionnaire design

The questionnaire for this research was adapted from existing published literature (Creswell & Creswell, 2018). Those articles are summarised in the table below:

Table 2: Summary constructs and literature used to adapt the research questionnaire from

Construct	Literature from which it has been adapted for this study
Leadership	(Vinger & Cilliers, 2006)
Organisational justice mechanisms	(Moorman, 1991; Niehoff & Moorman, 1993)
Trust	(McAllister, 1995)

Source: Author's compilation

The wording within the questionnaire was adapted to cater for the relative perceptions of participants. Examples of this adaption can be seen in the table below:

Table 3: Traceability matrix for adapted research questionnaire

Question	Literature	Original question	Adapted question used in survey
TFL_1	(Vinger & Cilliers, 2006)	I make others feel good to be around me	My leader makes me feel good about myself
TFL_12	(Vinger & Cilliers, 2006)	I give personal attention to others who seem rejected	My leaders gives personal attention to others who seem rejected
TRC_1	(Vinger & Cilliers, 2006)	I tell others what to do if they want to be rewarded for their work	My leader tells me what I need to do, to be rewarded for my work
TRC_5	(Vinger & Cilliers, 2006)	I call attention to what others can get for what they accomplish	My leader calls attention to what others and I can get for what we accomplish
DJM_1	(Moorman, 1991)	Fairly rewarded considering the responsibilities	I am fairly rewarded, given my responsibilities
DJM_5	(Moorman, 1991)	Fairly rewarded for the stresses and strains of your job	I am fairly rewarded, for the stresses and strains of my job
PJM_1	(Moorman, 1991)	Procedures are designed to collect accurate information necessary for making decisions	Our company procedures are designed to collect accurate information necessary for making decisions

PJM_5	(Moorman, 1991)	Procedures are designed to hear the concerns of all those affected by the decision	Our company procedures are designed to hear the concerns of all those affected by the decision
IJM_1	(Moorman, 1991)	Your supervisor considered your viewpoint	My leader considers my viewpoint
IJM_6	(Moorman, 1991)	Your supervisor took steps to deal with you in a truthful manner	My leader takes steps to deal with me in a truthful manner
ABT_1	(McAllister, 1995)	We have a sharing relationship. We can both freely share our ideas, feelings and hopes	My leader and I have a sharing relationship. We can both freely share our ideas, feelings and hopes
ABT_5	(McAllister, 1995)	I would have to say that we have both made considerable emotional investment in our working relationships	I would have to say that my leader and I have both made considerable emotional investment in our working relationships
CBT_1	(McAllister, 1995)	This person approaches his/her job with professionalism and dedication	My leader approaches his/her job with professionalism and dedication

CBT_5	(McAllister, 1995)	Other work associates of mine who must interact with this individual, trust and respect him/her to be trustworthy	Other work associates of mine who must interact with my leader, trust and respect him/her to be trustworthy
CBT_6	(McAllister, 1995)	If people knew more about this individual and his/her background, they would be more concerned and monitor his/her performance more closely	If people knew more about my leader and his/her background, they would be more concerned and monitor his/her performance more closely

It is important to note that CBT_6 was reverse scored and therefore had to be adjusted before any statistical analysis could be conducted. As indicated in the table above, the wording used for CBT_6 was adapted as followed: "If people knew more about my leader and his/her background, they would be more concerned and monitor his/her performance more closely", measured on the same Likert scale as the rest of the observed indicators for this research.

Four demographic questions were asked of the participants, covering age, gender, time of service at their respective organisations as well as their relevant level of management within those organisations. A generic description was chosen for all demographic variables, so as to cater for the fact that the questionnaire was administered to a number of organisations, each having their own organisational structures. An example of such a description used was item DD_3, "Years of service at the Company", for which respondents could select (i) "0 – 3 years", (ii) "3 – 5 years", (iii) "5 – 10 years", (iv) "10 – 15 years", and (v) "longer than 15 years", and item DD_4, "Managerial level", for which respondents could select (i) "Junior Management", (ii) "Middle Management", (iii) "Senior Management", (iv) "Executive Management", and (v) "Not Applicable".

All observed variables making up the latent constructs as part of this research, (i) transformational leadership, (ii) transactional leadership, (iii) distributive justice, (iv) procedural justice, (v) interactional justice, (vi) affect-based trust, and (vii) cognition-based trust, were measured using a seven-point Likert scale. The scale used is reflected in the table below.

Table 4: Seven-point Likert scale descriptions used

1	Very Strongly Disagree
2	Strongly Disagree
3	Disagree
4	Neither Agree nor Disagree
5	Agree
6	Strongly Agree
7	Very Strongly Agree

The questions used in measuring the latent constructs of transformational and transactional leadership were adapted from an existing published academic article (Vinger & Cilliers, 2006). The questions used from the selected article was in turn based on the Multifactor Leadership Questionnaire (MLQ 6S), developed by Avolio, Bass and Jung (1999).

Twelve observed variables were used to measure the latent construct of transformational leadership (Vinger & Cilliers, 2006): three observed variables per each of the four leadership attributes explained for transformational leadership earlier, being (i) idealised influence, (ii) inspirational motivation, (iii) intellectual stimulation, and (iv) individual consideration (Ng, 2017; Vinger & Cilliers, 2006). Questions included, amongst others, “My leader makes me feel good about myself”, which measured idealised influence and “My leader provides a clear indication of what I could and should do at work”, which measured inspirational motivation.

Six observed variables were used to measure the latent construct of transactional leadership (Vinger & Cilliers, 2006): three observed variables per each of the two leadership attributes explained for transactional leadership earlier, being (i) contingent reward, and (ii) management-by-exception (Vinger & Cilliers, 2006). Questions included, amongst others, “My leader tells me what I need to do, to be rewarded for my work”,

which measured contingent reward and “My leader is satisfied when I meet agreed-upon standards of work”, which measured management-by-exception.

The questions used to measure the perception of the three organisational justice mechanisms in the relevant organisations were adapted from Moorman (1991) as well as Niehoff and Moorman (1993). Five observed variables were used to measure the latent construct of distributive justice, seven observed variables were used to measure the latent construct of procedural justice and six observed variables were used to measure the latent construct of interactional justice. Questions included, amongst others, “I am fairly rewarded, given my responsibilities”, which measured distributive justice; “Our company procedures are designed to collect accurate information necessary for making decisions”, which measured procedural justice, and “My leader considers my viewpoint”, which measured interactional justice.

The questions used to measure the perception of the two trust mechanisms in the relevant organisations were adapted from McAllister (1995). Five observed variables were used to measure the latent construct of affect-based trust and six observed variables were used to measure the latent construct of cognition-based trust. Questions included, amongst others, “My leader and I have a sharing relationship. We can both freely share our ideas, feelings and hopes”, which measured affect-based trust, and “My leader approaches his/her job with professionalism and dedication”, which measured cognition-based trust.

A sample of the questionnaire used can be seen in Appendix 4.

4.7.2. Pretesting of the questionnaire

To ensure that the research questionnaire was suitable, a pilot survey was done. Fifteen individuals were asked to do the pilot survey (Creswell & Creswell, 2018). The output from this pilot survey was then used to determine:

1. Potential issues in participant fatigue based on how long it takes for a participant to complete the survey instrument (Creswell & Creswell, 2018).
2. How to potentially improve the questions, format and instructions on the survey instrument so that it is easily understandable by the participants (Creswell & Creswell, 2018; Mozumder, 2018).

The feedback received from the pilot survey was positive, with minor changes proposed to words used in the statements. Another point of feedback was that even though the number of questions were significant, the statements were short, easy to understand and to the point. It can therefore be said that the purpose of the pilot survey was achieved, with the aim of improving the survey instrument before starting with the official data collection process. It is important to note that data from the pilot survey was kept separately, so as to not contaminate the final data set used for the statistical analysis (Creswell & Creswell, 2018).

4.8. Data gathering process

The data gathering process that was followed made use of an electronic survey distributed to groups of individuals in three organisations, making use of electronic mail. The electronic survey tool used was Qualtrics. For each of the three organisations, an anonymous link to the survey was created. This was done to determine the relative response rate per organisation as well as the overall response rate to the survey conducted.

Following the distribution of the survey, two follow up reminders were sent to each of the three organisations to raise the response rate as high as possible. It was encouraging to see that following each reminder message, a number of responses were added to the overall sample, therefore achieving the goal of increasing the response rate to the survey questionnaire.

4.9. Data analysis approach

This section looks at the data analysis approach followed post the data collection phase. The first part of the data analysis focused on descriptive statistics using Excel and SPSS. The next part of the data analysis looked at the construct reliability and validity of the constructs measured using the survey questionnaire as discussed earlier, using SPSS and SmartPLS 3.

The next part of the data analysis made use of SmartPLS 3 to conduct a PLS-SEM with the data collected in an effort to determine the effect of the mediating power of the three organisational justice mechanisms discussed earlier. This software package is recommended by Hair et al. (2011) as being a suitable tool to make use of when doing a PLS-SEM analysis.

4.9.1. Summarising of data

As indicated earlier, the data was collected electronically making use of Qualtrics, an online survey instrument used for data collection. To keep track of the number of respondents, a unique anonymous link was generated and shared with the respective organisations that took part in the survey. At the end of the collection period, the surveys were closed online, and the data was extracted in the form of a Microsoft Excel document. In Excel, the data clean-up was done to remove partially completed surveys and combine the data from all organisations that took part in the survey.

As indicated earlier, a seven-point Likert scale was used to measure the observed variables per latent construct. To simplify the data, the statements per observed variable were changed to numeric indicators. As an example, very strongly disagree was replaced by the number 1, and very strongly agree was replaced by 7. The summarised data was saved in a tabular format to allow for the data to be imported into the statistical analysis tools, SPSS and SmartPLS 3.

4.9.2. Descriptive statistics

The descriptive statistics used in the analysis focused on the mean, minimum, maximum and standard deviation per observed variable. This was then calculated per latent construct, making use of the average scores for all observed variables.

4.9.3. Construct validity

Two sub elements of construct validity exist and was performed using the collected data, the first being discriminant validity and the second being convergent validity (Bagozzi, 2011). To test for discriminant validity, a Pearson's correlation was done using SPSS. This test evaluates the correlation between each individual indicator item making up the latent construct and the total item score. If this correlation was found to be significant; discriminant validity could be established.

Furthermore, another test for discriminant validity was done, making use of SmartPLS 3, known as the Heterotrait-Monotrait (HTMT) Ratio. This test for discriminant validity evaluates the correlations between the respective latent constructs, being transformational leadership, transactional leadership, distributive justice, procedural justice, interactional justice, affect-based trust and cognition-based trust (Henseler et al., 2015). To indicate discriminant validity in this test, all reported values should be less than 0.9, with some scholars proposing 0.85 (Henseler et al., 2015)

For convergent validity, the average variance extracted (AVE) was considered as part of the SmartPLS output information. An acceptable AVE would be any value greater than 0.5, which indicates that a latent construct explains at least 50% of the variance of its observed variables (Hair et al., 2011; Hair et al., 2019).

4.9.4. Instrument reliability

The measurement that was used to determine the construct reliability was that of the Cronbach's alpha for each of the latent constructs. An acceptable Cronbach's alpha result is greater than 0.7 (Hair et al., 2020). This was an important part of the research process because, before it was possible to measure the effect that certain latent constructs have on others, it needed to be confirmed that the observed variables measured reflect the core construct that it was supposed to measure (Bagozzi, 2011).

4.9.5. Test for common method bias

Given that the measures used for each of the latent constructs were self-reported, a single factor Harman's test was done to test for common method bias using SPSS (Podsakoff et al., 2003; Schwarz, 2017; Storm & Scheepers, 2019). The single factor Harman's test evaluates the percentage of total variance that can be explained by one of the indicator variables (Schwarz et al., 2017).

Furthermore, results from the single factor Harman's test should indicate that no single factor contributes more than 50% of the total variance (Schwarz et al., 2017). If this is found to be the case, that one single factor explains more than 50% of the variance compared to all other indicator variables, there is a likelihood of common method bias, which can potentially contribute to false positive (type I errors) or false negative (type II errors) (Kock, 2015). The common method bias analysis is recommended to be done for a PLS-SEM, hence another reason why it was selected to be part of this statistical analysis (Schwarz et al., 2017).

4.9.6. Test for normality

The next part of the analysis focused on a test for normality of the data collected that would be used in the statistical analysis. This was important as the statistical tests for normally distributed data and non-normally distributed data would differ, being parametric type tests for normally distributed data and non-parametric tests for non-normally distributed data (Hair et al., 2011).

For this analysis, SPSS was used, and the test criteria used was to evaluate the Shapiro-Wilk Sig value (Shapiro & Francia, 1972). This method of testing for a normal distribution

was selected because it is suitable for samples larger than 50 (Shapiro & Francia, 1972; Zhang et al., 2016). If the Shapiro-Wilk Sig value was greater than $p > 0.05$, the data was normally distributed, however if the Shapiro-Wilk Sig value was less than $p < 0.05$, normality was violated.

4.9.7. Evaluation of structural model

Once it was confirmed that the latent constructs complied to the required quality standards as explained above, the next step of the analysis looked at the actual model that was run in SmartPLS 3 to test the strength and significance of the relationships between the latent constructs. The quality of the model was evaluated using a number of key variables as proposed by Hair et al. (2011) and is explained in more detail below.

The first measurement used to evaluate the quality of the model was to report on the outer loadings of the observed variables per latent construct making use of SmartPLS 3. The outer loadings were used as all latent constructs were measured using reflective measurements (Hair et al., 2011; Hair, Risher, et al., 2019). For these to be sufficient, values greater than 0.70 was accepted (Ringle & Sarstedt, 2016).

The second measurement used to evaluate the quality of the model was to report on the adjusted R^2 . The adjusted R^2 was reported on because the analysis was done on a sample of the entire population and not the complete population. Adjusted R^2 is the percentage of variance explained in the endogenous variables, being distributive justice, procedural justice, interactional justice, affect-based trust and cognition-based trust, as a function of the exogenous variables, being transformational leadership and transactional leadership. Values of 0.75, 0.5 and 0.25 indicates a substantial, moderate or weak indicative power to explain the variance for the respective endogenous variables (Hair et al., 2011).

The third measurement used to evaluate the model was Stone-Geisser's Q^2 (Hair et al., 2011). Q^2 is a measurement of the predictiveness of the model which in turn supports the use of the results outside of the chosen sample and be extended to the rest of the population. The Q^2 value was obtained using a sample reuse technique, called blindfolding (Hair et al., 2011). It is important to note that a blindfolding procedure is only applied on endogenous variables which are measured reflectively, which is the same in the case of this analysis (Hair et al., 2011). Q^2 values greater than zero indicates that the exogenous variables, transformational and transactional leadership, have predictive

power over the endogenous variables, those being the components of the organisational justice mechanism and the components of the trust mechanisms (Hair et al., 2011).

4.9.8. Testing the hypotheses

PLS-SEM was used to test the various hypotheses. The aim of these tests using PLS-SEM was to test for the strength and significance of the relationships between latent constructs and if they were present as hypothesised. The statistical tool used for this analysis was SmartPLS 3 (Hair, Risher, et al., 2019; Ringle et al., 2015).

Given the complexity of the structural model and as recommended by Hair et al. (2011) and Nitzl (2016), a bootstrapping procedure was performed to test for the significance of the mediating effects, as hypothesised in chapter three between the various latent constructs (Hair et al., 2011; Nitzl et al., 2016). The selection of this statistical analysis method was further supported by Nitzl et al. (2016) who stated that a PLS-SEM is a good analysis technique that can be used to test for mediation.

4.10. Conclusion

In summary, the research design was based on analysing the relationships between reflectively measured latent constructs (transformational leadership, transactional leadership, distributive justice, procedural justice, interactional justice, affect-based trust and cognition-based trust) using partial least squares structural equation modelling. A seven-point Likert scale was used to measure all the reflective indicators per latent construct. The questions used in the questionnaire to measure each of the latent constructs were adapted from existing published literature, so as to improve the quality of the research design. The questionnaire was shared via electronic mail, followed by a number of follow up reminder messages in an effort to increase the response rate.

The software package SPSS was used to test some of the first order statistics and results of this can be found in chapter five that follows hereafter. The software package SmartPLS 3 was used to test for construct validity, construct reliability as well as the quality criteria of the proposed structural model. The consistent PLS and consistent bootstrapping algorithms in SmartPLS 3 were used for the statistical analysis, given that all the latent constructs were measured using reflective indicators.

For the structural model used in SmartPLS 3, transformational leadership and transactional leadership was taken as the exogenous latent constructs, with no path relationships pointing towards them, whereas distributive justice, procedural justice,

interactional justice, affect-based trust and cognition-based trust were the endogenous latent constructs, with path relationships pointing towards them.

5. Research results

5.1. Introduction

This chapter focuses on a discussion of the research results. The subsections cover the survey response rate, survey demographics, descriptive statistics, construct validity, instrument reliability, test for common method bias, test for normality, an evaluation of the structural model proposed and lastly the results for the hypotheses tests conducted based on the output from the structural model.

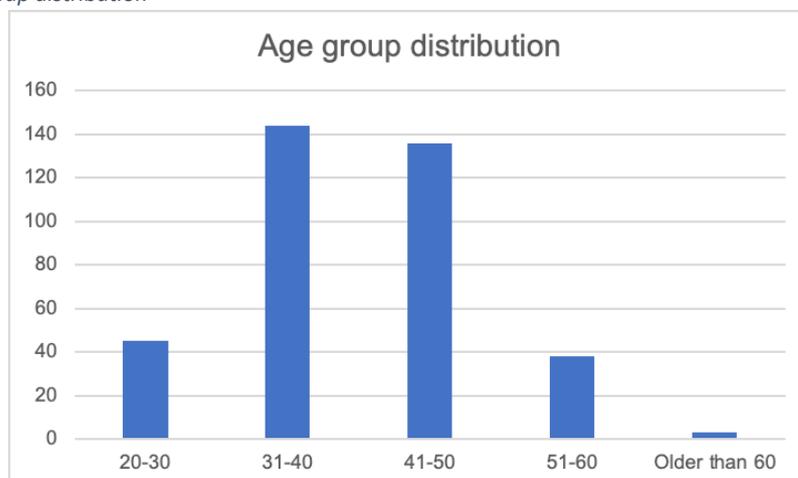
5.1.1. Survey response rate

The electronic survey was distributed via electronic mail to 943 individuals across three prominent organisations in South Africa. In total, 465 responses were received, of which 112 was incomplete. However, if the respondent completed more than 50% of the questionnaire (51% or more), it is possible to replace the balance of the values with the average of the other respondents, based on some demographic identifier (Hair, Gabriel, et al., 2019). Given that the majority of the respondents answered as males, males was used as the demographic identifier to select the sample of responses that were used to complete the missing data. In making use of this approach, a further 13 responses could be included for the data analysis, taking the total sample to 366 responses, a response rate of 38.81%.

5.1.2. Survey demographics

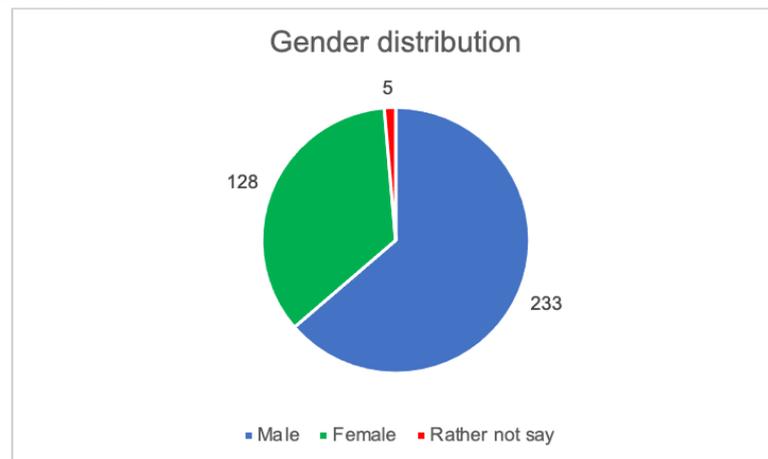
The next section discusses the survey demographics based on the data collected. This focuses on (i) the age distribution of all respondents, (ii) the gender distribution, (iii) the management level distribution, as well as (iv) the distribution of tenure at their respective organisations.

Figure 3: Age group distribution



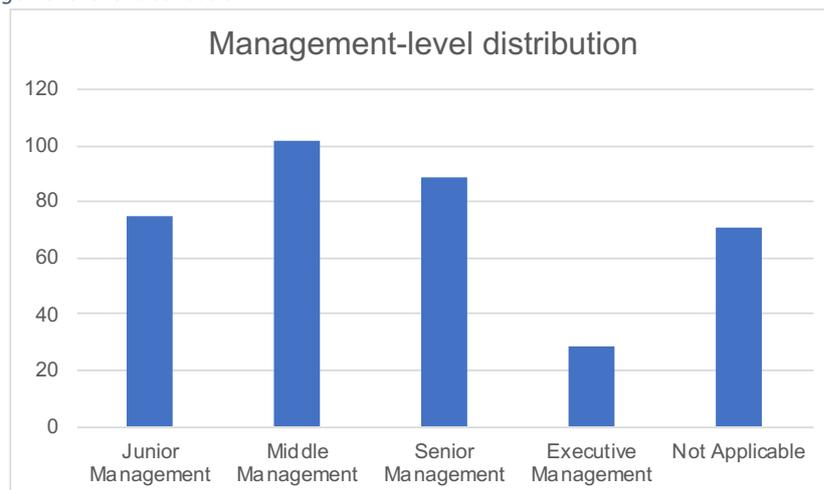
The above reflects a positive skew, with a small number of large outliers towards the higher age groups. This is to be expected, given the breadth of organisations used for the data collection and the general working age of individuals in South Africa which is discussed in more detail in chapter six.

Figure 4: Gender distribution



As Figure 4 shows, 34.97% of the sample were females and 63.66% of the sample were males; 1.37% of the sample preferred not to share their gender for the purpose of this research. A comparison of this distribution with the working population in South Africa is discussed as part of the results discussion in chapter six.

Figure 5: Management-level distribution



The majority of the respondents formed part of the middle management groups across these various organisations and the minority of the respondents formed part of the executive management groups across the respective organisations. A comparison of this

distribution with the working population in South Africa is discussed as part of the results discussion in chapter six.

Figure 6: Distribution of tenure at organisation

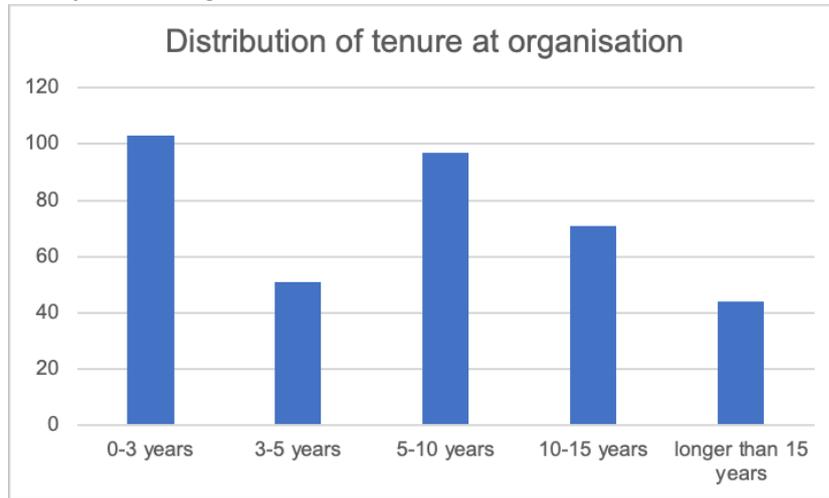


Figure 6 shows binomial distribution with the majority of employees having worked for their respective organisations for “0 – 3 years” and “5 – 10 years”. Furthermore, it is interesting to note that most respondents had been with their respective organisations “0 – 3 years”, with the minority of the respondents having been with their respective organisations for “longer than 15 years”.

5.1.3. Descriptive statistics

The next section focuses on the descriptive statistics for each of the research constructs. The statistical tool used for this analysis was SPSS.

Table 5: Descriptive statistics for Transformational Leadership measurements

Items	N	Minimum	Maximum	Mean	Std. Deviation
TFL_1	366	1	7	4.96	1.55
TFL_2	366	1	7	4.92	1.55
TFL_3	366	1	7	4.98	1.59
TFL_4	366	1	7	4.76	1.72
TFL_5	366	1	7	4.95	1.71
TFL_6	366	1	7	4.63	1.69
TFL_7	366	1	7	4.60	1.63
TFL_8	366	1	7	4.99	1.79
TFL_9	366	1	7	5.14	1.71
TFL_10	366	1	7	4.61	1.69
TFL_11	366	1	7	4.66	1.68
TFL_12	366	1	7	4.25	1.68
Valid N (listwise)	366				

As per the table above, for the transformational leadership construct, the measured variable with the highest mean score was TFL_9 with a mean score of 5.14 and a

standard deviation of 1.71. The measured variable with the lowest mean score was TFL_12 with a mean score of 4.25 and a standard deviation of 1.68.

Table 6: Descriptive statistics for Transactional Leadership measurements

Items	N	Minimum	Maximum	Mean	Std. Deviation
TRC_1	366	1	7	4.31	1.68
TRC_2	366	1	7	5.43	1.43
TRC_3	366	1	7	4.55	1.69
TRC_4	366	1	7	4.39	1.57
TRC_5	366	1	7	4.37	1.59
TRC_6	366	1	7	5.01	1.51
Valid N (listwise)	366				

As per the table above, for the transactional leadership construct, the measured variable with the highest mean score was TRC_2 with a mean score of 5.43 and a standard deviation of 1.43. The measured variable with the lowest mean score was TRC_1 with a mean score of 4.31 and a standard deviation of 1.68.

Table 7: Descriptive statistics for Distributive Justice measurements

Items	N	Minimum	Maximum	Mean	Std. Deviation
DJM_1	366	1	7	4.17	1.70
DJM_2	366	1	7	4.04	1.69
DJM_3	366	1	7	3.90	1.77
DJM_4	366	1	7	4.04	1.74
DJM_5	366	1	7	3.65	1.75
Valid N (listwise)	366				

As per the table above, for the distributive justice construct, the measured variable with the highest mean score was DJM_1 with a mean score of 4.17 and a standard deviation of 1.70. The measured variable with the lowest mean score was DJM_5 with a mean score of 3.65 and a standard deviation of 1.75.

Table 8: Descriptive statistics for Procedural Justice measurements

Items	N	Minimum	Maximum	Mean	Std. Deviation
PJM_1	366	1	7	3.92	1.59
PJM_2	366	1	7	3.82	1.63
PJM_3	366	1	7	4.02	1.53
PJM_4	366	1	7	4.10	1.60
PJM_5	366	1	7	3.99	1.60
PJM_6	366	1	7	4.02	1.53
PJM_7	366	1	7	4.15	1.54
Valid N (listwise)	366				

As per the table above, for the procedural justice construct, the measured variable with the highest mean score was PJM_7 with a mean score of 4.15 and a standard deviation

of 1.54. The measured variable with the lowest mean score was PJM_2 with a mean score of 3.82 and a standard deviation of 1.63.

Table 9: Descriptive statistics for Interactional Justice measurements

Items	N	Minimum	Maximum	Mean	Std. Deviation
IJM_1	366	1	7	4.99	1.67
IJM_2	366	1	7	4.60	1.77
IJM_3	366	1	7	4.58	1.69
IJM_4	366	1	7	5.30	1.63
IJM_5	366	1	7	5.14	1.66
IJM_6	366	1	7	5.12	1.63
Valid N (listwise)	366				

As per the table above, for the interactional justice construct, the measured variable with the highest mean score was IJM_4 with a mean score of 5.30 and a standard deviation of 1.63. The measured variable with the lowest mean score was IJM_3 with a mean score of 4.58 and a standard deviation of 1.69.

Table 10: Descriptive statistics for Affect-based trust measurements

Items	N	Minimum	Maximum	Mean	Std. Deviation
ABT_1	366	1	7	4.95	1.68
ABT_2	366	1	7	4.96	1.69
ABT_3	366	1	7	4.49	1.83
ABT_4	366	1	7	4.91	1.67
ABT_5	366	1	7	4.57	1.67
Valid N (listwise)	366				

As per the table above, for the affect-based trust construct, the measured variable with the highest mean score was ABT_2 with a mean score of 4.96 and a standard deviation of 1.69. The measured variable with the lowest mean score was ABT_3 with a mean score of 4.49 and a standard deviation of 1.83.

Table 11: Descriptive statistics for Cognition-based trust measurements

Items	N	Minimum	Maximum	Mean	Std. Deviation
CBT_1	366	1	7	5.67	1.47
CBT_2	366	1	7	5.48	1.63
CBT_3	366	1	7	5.08	1.71
CBT_4	366	1	7	5.11	1.60
CBT_5	366	1	7	5.16	1.57
CBT_6	366	1	7	4.74	1.92
Valid N (listwise)	366				

As per the table above, for the cognition-based trust construct, the measured variable with the highest mean score was CBT_1 with a mean score of 5.67 and a standard

deviation of 1.47. The measured variable with the lowest mean score was CBT_6 with a mean score of 4.74 and a standard deviation of 1.92.

5.2. Construct validity

Using the statistical software package SPSS, discriminant validity for each of the indicator variables against the total item score was evaluated for each of the research constructs making use of bi-variate correlations. This was done making use of Pearson's correlation and two-tailed tests, by running item total per construct against each question that made up that construct.

Table 12: Pearson's correlation for Transformational Leadership

		TFL_1	TFL_2	TFL_3	TFL_4	TFL_5	TFL_6	TFL_7	TFL_8	TFL_9	TFL_10	TFL_11	TFL_12
TFL_2	Pearson Correlation	.765**											
	Sig. (2-tailed)	0.00											
	N	366	366										
TFL_3	Pearson Correlation	.679**	.673**										
	Sig. (2-tailed)	0.00	0.00										
	N	366	366	366									
TFL_4	Pearson Correlation	.734**	.680**	.719**									
	Sig. (2-tailed)	0.00	0.00	0.00									
	N	366	366	366	366								
TFL_5	Pearson Correlation	.778**	.760**	.728**	.721**								
	Sig. (2-tailed)	0.00	0.00	0.00	0.00								
	N	366	366	366	366	366							
TFL_6	Pearson Correlation	.696**	.701**	.731**	.705**	.766**							
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00							
	N	366	366	366	366	366	366						
TFL_7	Pearson Correlation	.667**	.634**	.728**	.709**	.712**	.765**						
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00						
	N	366	366	366	366	366	366	366					
TFL_8	Pearson Correlation	.652**	.608**	.510**	.616**	.560**	.564**	.582**					
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
	N	366	366	366	366	366	366	366	366	366			
TFL_9	Pearson Correlation	.793**	.746**	.693**	.738**	.868**	.756**	.707**	.650**				
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
	N	366	366	366	366	366	366	366	366	366	366		
TFL_10	Pearson Correlation	.765**	.727**	.705**	.731**	.793**	.763**	.757**	.644**	.824**			
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	N	366	366	366	366	366	366	366	366	366	366	366	
TFL_11	Pearson Correlation	.629**	.622**	.719**	.678**	.721**	.732**	.784**	.596**	.729**	.787**		
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	N	366	366	366	366	366	366	366	366	366	366	366	366
TFL_12	Pearson Correlation	.625**	.597**	.537**	.625**	.636**	.614**	.578**	.645**	.670**	.679**	.665**	
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N	366	366	366	366	366	366	366	366	366	366	366	366
Item_Total_TFL	Pearson Correlation	.862**	.835**	.826**	.852**	.889**	.865**	.848**	.754**	.903**	.903**	.853**	.776**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N	366	366	366	366	366	366	366	366	366	366	366	366

** Correlation is significant at the 0.01 level (2-tailed).

As can be seen in the table above, for transformational leadership, it was found that all of the individual questions were significantly correlated to the item total score per construct. Therefore, validity was established for transformational leadership.

Table 13: Pearson's correlation for Transactional Leadership

		TRC_1	TRC_2	TRC_3	TRC_4	TRC_5	TRC_6
TRC_2	Pearson Correl:	.639**					
	Sig. (2-tailed)	0.00					
	N	366	366				
TRC_3	Pearson Correl:	.602**	.658**				
	Sig. (2-tailed)	0.00	0.00				
	N	366	366	366			
TRC_4	Pearson Correl:	-0.10	0.01	-0.08			
	Sig. (2-tailed)	0.07	0.88	0.13			
	N	366	366	366	366		
TRC_5	Pearson Correl:	.662**	.603**	.604**		-0.02	
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.67	
	N	366	366	366	366	366	366
TRC_6	Pearson Correl:	.575**	.657**	.599**	-0.0744	.79598	.667**
	Sig. (2-tailed)	0.00	0.00	0.00	0.16	0.00	0.00
	N	366	366	366	366	366	366
Item_Total_TRC	Pearson Correl:	.803**	.833**	.803**	.170**	.830**	.802**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00
	N	366	366	366	366	366	366

** Correlation is significant at the 0.01 level (2-tailed).

As can be seen in the table above, for transactional leadership, it was found that all of the individual questions were significantly correlated to the item total score per construct. It is important to note that even though TRC_4 had a significant correlation with the item total, it was noticeably lower than the other variables that make up the transactional leadership construct. Therefore, validity was established for transactional leadership.

Table 14: Pearson's correlation for Distributive Justice

		DJM_1	DJM_2	DJM_3	DJM_4	DJM_5
DJM_2	Pearson Correlation	.875**				
	Sig. (2-tailed)	0.00				
	N	366	366			
DJM_3	Pearson Correlation	.850**	.841**			
	Sig. (2-tailed)	0.00	0.00			
	N	366	366	366		
DJM_4	Pearson Correlation	.844**	.833**	.882**		
	Sig. (2-tailed)	0.00	0.00	0.00		
	N	366	366	366	366	
DJM_5	Pearson Correlation	.782**	.787**	.871**	.826**	
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	
	N	366	366	366	366	366
Item_Total_DJM	Pearson Correlation	.931**	.928**	.953**	.940**	.915**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00
	N	366	366	366	366	366

** . Correlation is significant at the 0.01 level (2-tailed).

As can be seen in the table above, for distributive justice, it was found that all of the individual questions were significantly correlated to the item total score per construct. Therefore, validity was established for distributive justice.

Table 15: Pearson's correlation for Procedural Justice

		PJM_1	PJM_2	PJM_3	PJM_4	PJM_5	PJM_6	PJM_7
PJM_2	Pearson Correlation	.806**						
	Sig. (2-tailed)	0.00						
	N	366	366					
PJM_3	Pearson Correlation	.747**	.793**					
	Sig. (2-tailed)	0.00	0.00					
	N	366	366	366				
PJM_4	Pearson Correlation	.765**	.789**	.849**				
	Sig. (2-tailed)	0.00	0.00	0.00				
	N	366	366	366	366			
PJM_5	Pearson Correlation	.714**	.756**	.785**	.821**			
	Sig. (2-tailed)	0.00	0.00	0.00	0.00			
	N	366	366	366	366	366		
PJM_6	Pearson Correlation	.723**	.750**	.781**	.776**	.842**		
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00		
	N	366	366	366	366	366	366	
PJM_7	Pearson Correlation	.691**	.763**	.740**	.777**	.807**	.814**	
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	
	N	366	366	366	366	366	366	366
Item_Total_PJM	Pearson Correlation	.867**	.900**	.904**	.918**	.910**	.903**	.888**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N	366	366	366	366	366	366	366

** . Correlation is significant at the 0.01 level (2-tailed).

As can be seen in the table above, for procedural justice, it was found that all of the individual questions were significantly correlated to the item total score per construct. Therefore, validity was established for procedural justice.

Table 16: Pearson's correlation for Interactional Justice

		IJM_1	IJM_2	IJM_3	IJM_4	IJM_5	IJM_6
IJM_2	Pearson Correlation	.722**					
	Sig. (2-tailed)	0.00					
	N	366	366				
IJM_3	Pearson Correlation	.721**	.670**				
	Sig. (2-tailed)	0.00	0.00				
	N	366	366	366			
IJM_4	Pearson Correlation	.836**	.726**	.703**			
	Sig. (2-tailed)	0.00	0.00	0.00			
	N	366	366	366	366		
IJM_5	Pearson Correlation	.797**	.727**	.742**	.848**		
	Sig. (2-tailed)	0.00	0.00	0.00	0.00		
	N	366	366	366	366	366	
IJM_6	Pearson Correlation	.775**	.740**	.753**	.840**	.847**	
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	
	N	366	366	366	366	366	366
Item_Total_IJM	Pearson Correlation	.902**	.856**	.854**	.920**	.922**	.921**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00
	N	366	366	366	366	366	366

** . Correlation is significant at the 0.01 level (2-tailed).

As can be seen in the table above, for interactional justice, it was found that all of the individual questions were significantly correlated to the item total score per construct. Therefore, validity was established for interactional justice.

Table 17: Pearson's correlation for Affect-based Trust

		ABT_1	ABT_2	ABT_3	ABT_4	ABT_5
ABT_2	Pearson Correlation	.865**				
	Sig. (2-tailed)	0.00				
	N	366	366			
ABT_3	Pearson Correlation	.723**	.733**			
	Sig. (2-tailed)	0.00	0.00			
	N	366	366	366		
ABT_4	Pearson Correlation	.814**	.863**	.764**		
	Sig. (2-tailed)	0.00	0.00	0.00		
	N	366	366	366	366	
ABT_5	Pearson Correlation	.780**	.788**	.764**	.783**	
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	
	N	366	366	366	366	366
Item_Total_ABT	Pearson Correlation	.916**	.931**	.879**	.926**	.902**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00
	N	366	366	366	366	366

** . Correlation is significant at the 0.01 level (2-tailed).

As can be seen in the table above, for affect-based trust, it was found that all of the individual questions were significantly correlated to the item total score per construct. Therefore, validity was established for affect-based trust.

Table 18: Pearson's correlation for Cognition-based Trust

		CBT_1	CBT_2	CBT_3	CBT_4	CBT_5	CBT_6
CBT_2	Pearson Correlation	.863**					
	Sig. (2-tailed)	0.00					
	N	366	366				
CBT_3	Pearson Correlation	.715**	.788**				
	Sig. (2-tailed)	0.00	0.00				
	N	366	366	366			
CBT_4	Pearson Correlation	.744**	.806**	.786**			
	Sig. (2-tailed)	0.00	0.00	0.00			
	N	366	366	366	366		
CBT_5	Pearson Correlation	.770**	.832**	.764**	.884**		
	Sig. (2-tailed)	0.00	0.00	0.00	0.00		
	N	366	366	366	366	366	
CBT_6	Pearson Correlation	.209**	.204**	.144**	.111*	.153**	
	Sig. (2-tailed)	0.00	0.00	0.01	0.03	0.00	
	N	366	366	366	366	366	366
Item_Total_CBT	Pearson Correlation	.877**	.919**	.861**	.883**	.898**	.409**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00
	N	366	366	366	366	366	366

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

As can be seen in the table above, for cognition-based trust, it was found that all of the individual questions were significantly correlated to the item total score per construct. Therefore, validity was established for cognition-based trust.

Another test for discriminant validity was also available from the SmartPLS 3 output, known as the Heterotrait-Monotrait (HTMT) Ratio. This test for discriminant validity evaluates the correlations between the respective latent constructs (Henseler et al., 2015). To indicate discriminant validity in this test, all reported values should be less than 0.9, with some scholars proposing 0.85 (Henseler et al., 2015). As can be seen from the table below, this was the case for all latent variables except for the correlation between transformational leadership and transactional leadership, which may be explained by the leadership continuum that exists between transformational leadership and transactional leadership (Vinger & Cilliers, 2006).

Table 19: HTMT ratio for all latent constructs

HTMT	Affect-based Trust (ABT)	Cognition-based Trust (CBT)	Distributive Justice (DJM)	Interactional Justice (IJM)	Procedural Justice (PJM)	Transformational Leadership (TFL)
Cognition-based Trust (CBT)	0.84					
Distributive Justice (DJM)	0.49	0.44				
Interactional Justice (IJM)	0.86	0.87	0.55			
Procedural Justice (PJM)	0.56	0.53	0.50	0.63		
Transformational Leadership (TFL)	0.83	0.84	0.46	0.87	0.55	
Transactional Leadership (TRC)	0.82	0.80	0.56	0.87	0.57	0.95

For convergent validity, the average variance extracted (AVE) was considered as part of the output from SmartPLS 3. As can be seen from the table below, the AVE for all latent constructs was significant and greater than 0.5, which indicates that the latent construct explains at least 50% of the variance of its observed variables (Hair et al., 2011; Hair, Risher et al., 2019).

Table 20: Average variance extracted for all latent constructs

Latent Construct	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
Affect-based Trust (ABT)	0.79	0.79	0.02	43.84	0
Cognition-based Trust (CBT)	0.67	0.67	0.02	39.69	0
Distributive Justice (DJM)	0.84	0.84	0.02	47.93	0
Interactional Justice (IJM)	0.77	0.77	0.02	35.97	0
Procedural Justice (PJM)	0.77	0.77	0.02	37.27	0
Transformational Leadership (TFL)	0.69	0.69	0.02	33.48	0
Transactional Leadership (TRC)	0.52	0.52	0.02	23.17	0

Following the analysis for construct validity, the next section focuses on the instrument reliability.

5.3. Instrument reliability

To test the instrument reliability, the statistical analysis software package SmartPLS 3 was used. The measurement for internal reliability was done for each of the measured latent constructs that formed part of the research questionnaire. Cronbach's alpha is commonly used when you have Likert scale questions, to measure if the scale is reliable (Hair et al., 2017; Hair et al., 2011).

Table 21: Cronbach's alpha for all latent constructs

Latent Construct	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Affect-based Trust (ABT)	0.95	0.95	0.95	0.79
Cognition-based Trust (CBT)	0.89	0.95	0.91	0.67
Distributive Justice (DJM)	0.96	0.97	0.96	0.84
Interactional Justice (IJM)	0.95	0.95	0.95	0.77
Procedural Justice (PJM)	0.96	0.96	0.96	0.77
Transformational Leadership (TFL)	0.96	0.97	0.96	0.69
Transactional Leadership (TRC)	0.80	0.90	0.84	0.52

As can be seen from the table above, upon the first iteration of reliability statistics, the Cronbach's alpha results for all latent constructs were found to be greater than 0.75 as recommended by Hair et al. (2011). The latent constructs with the highest Cronbach's alpha were distributive justice, procedural justice and transformational leadership, all

with a Cronbach's alpha of 0.96. The latent construct with the lowest Cronbach's alpha was that of transactional leadership, with a Cronbach's alpha of 0.80, which was still within the acceptable range as recommended.

The next part of the analysis focused on testing for the presence of potential common method bias, given the number of latent constructs and the complexity of the structural model.

5.4. Test for common method bias

Given that the measures used for each of the latent constructs were self-reported, a single factor Harman's test was done to test for common method bias using SPSS (Schwarz et al., 2017; Storm & Scheepers, 2019). The single factor Harman's test evaluates the percentage of total variance that can be explained by one of the indicator variables (Schwarz et al., 2017). The common method bias analysis is recommended to be done for a PLS-SEM, hence another reason why it was selected for this research analysis (Schwarz et al., 2017).

As can be noted from the table below, it was found that one of the factors contributed 53.20% of total variance explained. Therefore, based on this finding, there was a threat of common method bias.

Table 22: First iteration single factor Harman's test

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	25.41	54.07	54.07	25.01	53.20	53.20
2	3.97	8.45	62.52			
3	2.60	5.54	68.06			
4	1.67	3.56	71.62			
5	1.18	2.50	74.12			
6	1.00	2.13	76.26			
7	0.87	1.86	78.11			
8	0.79	1.69	79.80			
9	0.66	1.41	81.21			
10	0.60	1.27	82.48			
11	0.54	1.15	83.64			
12	0.49	1.05	84.69			
13	0.48	1.01	85.70			
14	0.40	0.86	86.56			
15	0.39	0.84	87.40			
16	0.36	0.76	88.16			
17	0.36	0.76	88.92			
18	0.32	0.67	89.59			
19	0.29	0.63	90.22			
20	0.29	0.62	90.84			
21	0.29	0.61	91.45			
22	0.27	0.57	92.02			
23	0.26	0.56	92.58			
24	0.25	0.53	93.11			
25	0.24	0.51	93.62			
26	0.22	0.46	94.08			
27	0.21	0.45	94.53			
28	0.19	0.41	94.94			
29	0.19	0.40	95.34			
30	0.18	0.39	95.73			
31	0.18	0.38	96.10			
32	0.17	0.36	96.46			
33	0.16	0.35	96.81			
34	0.15	0.33	97.13			
35	0.14	0.31	97.44			
36	0.14	0.29	97.73			
37	0.13	0.27	98.00			
38	0.12	0.26	98.26			
39	0.11	0.24	98.50			
40	0.11	0.23	98.73			
41	0.10	0.22	98.96			
42	0.10	0.22	99.17			
43	0.09	0.20	99.37			
44	0.08	0.18	99.55			
45	0.08	0.17	99.71			
46	0.07	0.15	99.87			
47	0.06	0.13	100.00			

Extraction Method: Principal Axis Factoring.

In an effort to improve these findings, a number of indicator variables were removed and the test was done again in SPSS. The indicator variables removed were TFL_5, TFL_9, TFL_10, IJM_1, IJM_5, IJM_6, ABT_2 and ABT_4. Following the removal of these indicator variables, the total variance explained by a single factor was 49.21% which is less than the recommended 50% (Podsakoff et al., 2003; Schwarz et al., 2017). Important to note here is that it is expected that for PLS-SEM analysis, the potential for

common method bias is high, given the high number of latent constructs typically used in such models as well as the potential overlap between these latent constructs (Kock, 2015). For the structural model done in SmartPLS 3, these indicator variables were also removed so as to not create false positives (type I errors) or false negatives (type II errors) (Kock, 2015).

Table 23: Second iteration single factor Harman's test

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	19.65	50.38	50.38	19.19	49.21	49.21
2	3.77	9.66	60.04			
3	2.59	6.65	66.69			
4	1.49	3.83	70.52			
5	1.13	2.91	73.43			
6	0.92	2.35	75.78			
7	0.83	2.13	77.90			
8	0.66	1.69	79.59			
9	0.63	1.60	81.19			
10	0.56	1.42	82.62			
11	0.53	1.35	83.97			
12	0.47	1.20	85.17			
13	0.43	1.09	86.26			
14	0.40	1.02	87.28			
15	0.37	0.95	88.23			
16	0.33	0.85	89.08			
17	0.32	0.83	89.91			
18	0.30	0.76	90.67			
19	0.27	0.70	91.37			
20	0.27	0.68	92.05			
21	0.26	0.67	92.72			
22	0.25	0.65	93.37			
23	0.24	0.62	93.99			
24	0.23	0.60	94.59			
25	0.20	0.52	95.11			
26	0.20	0.51	95.62			
27	0.19	0.48	96.10			
28	0.18	0.45	96.55			
29	0.16	0.42	96.97			
30	0.16	0.42	97.39			
31	0.15	0.39	97.78			
32	0.15	0.38	98.16			
33	0.14	0.36	98.52			
34	0.12	0.31	98.83			
35	0.11	0.28	99.11			
36	0.10	0.25	99.36			
37	0.09	0.23	99.59			
38	0.09	0.22	99.81			
39	0.07	0.19	100.00			

Extraction Method: Principal Axis Factoring.

The next part of the analysis focuses on normality, which supports the chosen analytical process for the rest of the analysis.

5.5. Test for normality

Following the confirmation of construct validity, instrument reliability and testing for the potential presence of common method bias, a test for normality for each of the constructs was done. This test was done to check and confirm if a parametric test could be done to test the hypotheses as defined, alternatively if normality was violated, a non-parametric test is prosed (Hair et al., 2011).

For this analysis, SPSS was again used, and the test criteria used was to evaluate the Shapiro-Wilk Sig value (Shapiro & Francia, 1972). This method of testing for a normal distribution was based on the fact that it is suitable for samples larger than 50 (Shapiro & Francia, 1972; Zhang et al., 2016). If it is found that the Shapiro-Wilk Sig value is greater than $p > 0.05$, it means the data is normally distributed. If the Shapiro-Wilk Sig value is less than $p < 0.05$, normality is violated.

Table 24: Test for normality

Latent Construct	Statistic	Shapiro-Wilk df	Sig.
Transformational Leadership (TFL)	0.96	366	0.00
Transactional Leadership (TRC)	0.97	366	0.00
Distributive Justice (DJM)	0.97	366	0.00
Procedural Justice (PJM)	0.98	366	0.00
Interactional Justice (IJM)	0.93	366	0.00
Affect-based Trust (ABT)	0.95	366	0.00
Cognition-based Trust (CBT)	0.94	366	0.00

As can be noted from the above table, normality was checked for all latent constructs; however, the Shapiro-Wilk Sig value was $p < 0.05$, therefore normality was violated (Shapiro & Francia, 1972; Zhang et al., 2016).

As per the results of the tests for normality provided above, it can be seen that normality was violated for all constructs. Therefore, the non-parametric alternative needed to be used when doing the statistical analysis (Hair et al., 2011). For all normality plots, please refer to Appendix 5. The non-parametric test used was partial leased squares structural equation modelling (PLS-SEM) (Hair et al., 2011).

5.6. Evaluation of structural model

Having determined that the latent constructs under investigation violated normality, PLS-SEM was used to test the respective hypotheses as defined in chapter three. Before this could be done, the quality of the structural model had to be tested and confirmed. This

was done using guidelines provided by Hair et al. (2011), and discussed here (Hair, Risher, et al., 2019).

The first review evaluated the outer loadings of the observed variables for the latent constructs measured reflectively. A summary of this can be seen in the table below, showing all indicator outer loadings. It is important to note that for this analysis in SmartPLS 3, the indicator variables that contributed to common method bias were removed and did not form part of the analysis. Those removed were TFL_5, TFL_9, TFL_10, IJM_1, IJM_5, IJM_6, ABT_2 and ABT_4.

Table 25: Outer loadings per indicator and per construct

	ABT	CBT	DJM	IJM	PJM	TFL	TRC
ABT_1	0.93						
ABT_3	0.84						
ABT_5	0.84						
CBT_1		0.88					
CBT_2		0.92					
CBT_3		0.87					
CBT_4		0.91					
CBT_5		0.89					
CBT_6		0.12					
DJM_1			0.84				
DJM_2			0.80				
DJM_3			0.93				
DJM_4			1.01				
DJM_5			0.97				
IJM_2				0.79			
IJM_3				0.85			
IJM_4				0.87			
PJM_1					0.94		
PJM_2					0.91		
PJM_3					0.84		
PJM_4					0.90		
PJM_5					0.89		
PJM_6					0.83		
PJM_7					0.86		
TFL_1						0.86	
TFL_11						0.83	
TFL_12						0.81	
TFL_2						0.85	
TFL_3						0.75	
TFL_4						0.79	
TFL_6						0.86	
TFL_7						0.79	
TFL_8						0.77	
TRC_1							0.74
TRC_2							0.82
TRC_3							0.83
TRC_4							-0.05
TRC_5							0.79
TRC_6							0.78

As can be noted from the table above, it was found that two items had poor loadings, less than 0.7 (Hair, Hollingsworth et al., 2017). The first item that had a poor loading was CBT_6, “If people knew more about my leader and his/her background, they would be more concerned and monitor his/her performance more closely”. The second item that

had a poor loading was TRC_4, “As long as things are working, my leader will not change anything”. However, it was decided to not remove these indicator variables for the rest of the analysis because if they were removed, the likelihood of common method bias would increase.

The next test of the quality of the structural model was to evaluate the adjusted R^2 . As indicated earlier, values of 0.75, 0.50 and 0.25 would indicate substantial, moderate and weak indicative power of the exogenous variables to explain the variance for the respective endogenous variables (Hair et al., 2011). As will be noted from the table below, the exogenous variables had substantial indicative power to explain variance in affect-based trust, cognition-based trust, and interactional justice whereas only a moderate to weak indicative power to explain variance in distributive justice and procedural justice. It is important to note though, that even having a moderate to weak indicative power over distributive justice and procedural justice, these were still found to be significant, with $p < 0.05$.

Table 26: Adjusted R^2 per latent construct

Adjusted R^2	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O /STDEV)	P Values
Affect-based Trust (ABT)	0.75	0.75	0.05	16.68	0
Cognition-based Trust (CBT)	0.78	0.78	0.05	16.60	0
Distributive Justice (DJM)	0.40	0.42	0.10	4.09	0
Interactional Justice (IJM)	0.82	0.82	0.04	22.86	0
Procedural Justice (PJM)	0.32	0.34	0.05	6.02	0

The next evaluation criteria considered was that of Stone-Geisser’s Q^2 , with Q^2 being a measure of the model’s predictive power outside of the selected sample (Hair et al., 2011). The results for this were obtained by running the blindfolding algorithm in SmartPLS 3. As per the recommendation from Hair et al. (2011), the blindfolding procedure is only applied to endogenous variables, measured reflectively and therefore suitable for this analysis. As can be seen from the table below, the Q^2 for all endogenous variables was greater than 0, indicating that the exogenous variables, being transformational leadership and transactional leadership, have predictive power over the endogenous variables, being distributive justice, procedural justice, interactional justice, affect-based trust and cognition-based trust (Hair et al., 2011).

Table 27: Stone-Geisser's Q^2

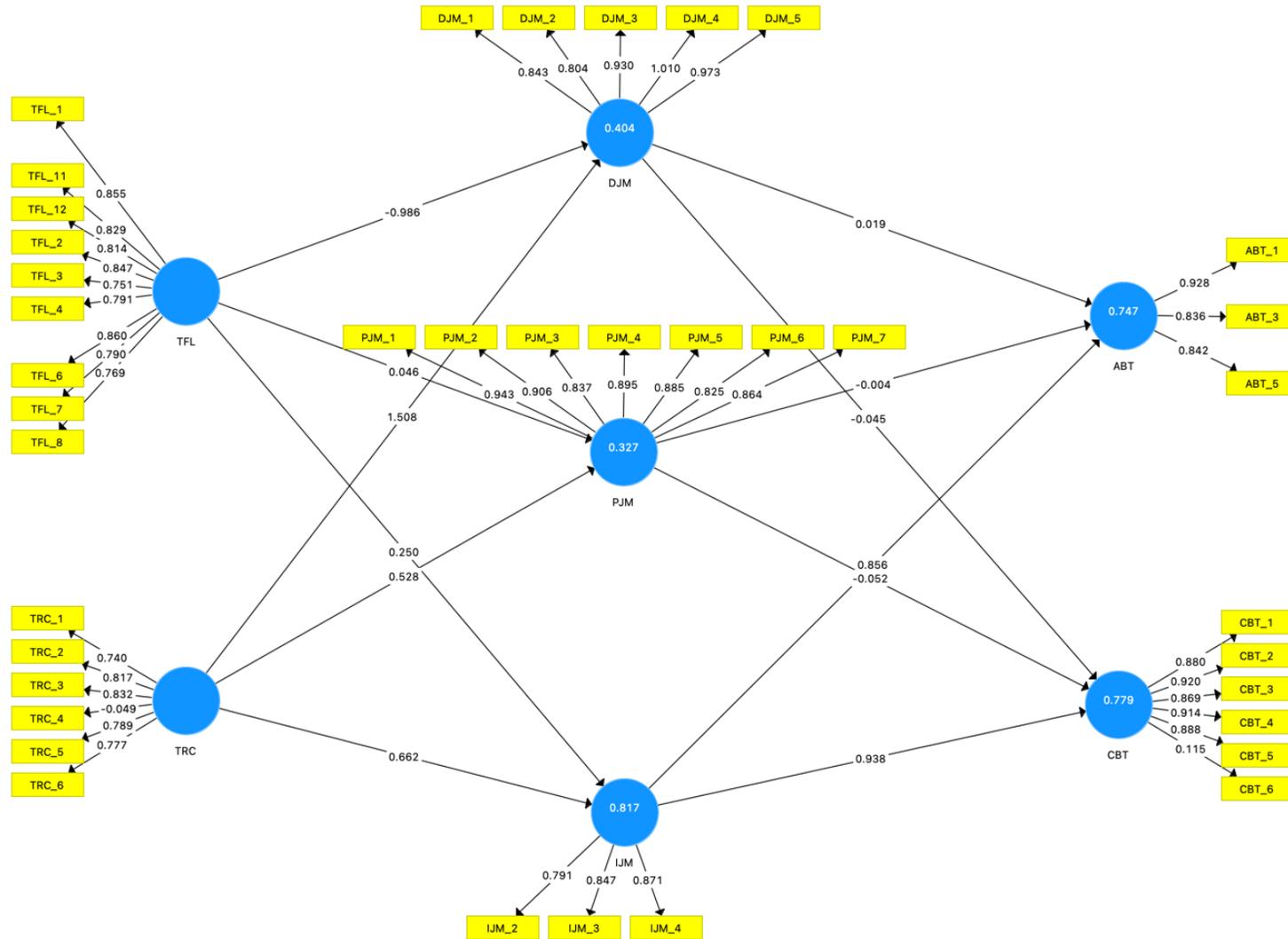
Q^2	SSO	SSE	$Q^2 (=1 - SSE/SSO)$
Affect-based Trust (ABT)	1098	403.12	0.63
Cognition-based Trust (CBT)	2196	830.45	0.62
Distributive Justice (DJM)	1830	378.49	0.79
Interactional Justice (IJM)	1098	476.87	0.57
Procedural Justice (PJM)	2562	669.96	0.74

Given that the quality of the measured constructs and quality of the structural model was determined as set out here, the next phase of the analysis was to evaluate the respective path weights and their significance, to either reject or fail to reject to research hypotheses as proposed in chapter three. The next section provides an overview of the findings and the results making use of SmartPLS 3.

5.7. Results for hypotheses tests

To be able to model the effect that leadership behaviours have on organisational justice mechanisms and in turn on the components of trust, a structural model was built in SmartPLS 3. A graphical representation of this structural model can be seen in the figure below. Given that the indicators making up the respective constructs were measured reflectively, the consistent PLS algorithm was used for the path analysis (Dijkstra & Henseler, 2015; Shmueli et al., 2019).

Figure 7: SmartPLS 3 output model



Making use of the consistent bootstrapping algorithm in SmartPLS 3, it was possible to evaluate the strength of both the total mediating effect as well as the specific mediating effects between the various latent constructs as well as the significance of those effects (Dijkstra & Henseler, 2015; Shmueli et al., 2019). The first analysis focuses on the total mediating effects evaluated using the SmartPLS 3 output as shown in the table below. This analysis from SmartPLS 3 considers the total mediating effect of all mediating variables, being distributive justice, procedural justice and interactional justice.

Table 28: Total effects of mediating variables

Total Indirect Effects	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
TFL -> ABT	0.195	0.153	0.248	0.787	0.431
TFL -> CBT	0.276	0.248	0.241	1.145	0.252
TRC -> ABT	0.594	0.638	0.248	2.396	0.017
TRC -> CBT	0.526	0.557	0.239	2.202	0.028

As can be seen from the table above, there was a positive total mediating effect from all independent variables, being transformational leadership and transactional leadership, on the dependant variables of affect-based trust and cognition-based trust, as mediated by all the organisational justice mechanisms. Importantly, this was when the mediating effect of all mediating variables were combined, hence the “total indirect effect” reported on in SmartPLS 3. All of these were significant except for the total mediating effect from transformational leadership on affect-based trust and cognition-based trust, as mediated by all the organisational justice mechanisms.

When delving deeper into the specific mediating affects, as reported on in SmartPLS 3 for individual mediating effects, it was however found that only one organisational justice mechanism had a significant mediating effect, being that of interactional justice. This is represented in the table below.

Table 29: Specific effects of mediating variables

Specific indirect effects	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
TFL -> DJM -> ABT	-0.02	-0.03	0.06	0.29	0.77
TRC -> DJM -> ABT	0.03	0.04	0.09	0.33	0.74
TFL -> IJM -> ABT	0.21	0.18	0.24	0.90	0.37
TRC -> IJM -> ABT	0.57	0.60	0.24	2.36	0.02
TFL -> PJM -> ABT	0.00	0.00	0.02	0.01	0.99
TRC -> PJM -> ABT	0.00	0.00	0.04	0.05	0.96
TFL -> DJM -> CBT	0.04	0.05	0.06	0.69	0.49
TRC -> DJM -> CBT	-0.07	-0.07	0.09	0.79	0.43
TFL -> IJM -> CBT	0.23	0.20	0.26	0.90	0.37
TRC -> IJM -> CBT	0.62	0.66	0.27	2.34	0.02
TFL -> PJM -> CBT	0.00	0.00	0.03	0.08	0.93
TRC -> PJM -> CBT	-0.03	-0.03	0.04	0.68	0.50

As can be seen from the table above, the only mediating endogenous variable that had a significant mediating effect between the independent exogenous variable (transactional leadership), and the dependant endogenous variables, being affect-based trust and cognition-based trust, was that of interactional justice. Neither of the other mediating endogenous variables (distributive justice and procedural justice) had a significant mediating effect.

Therefore, in the context of the specific research hypotheses as put forward in chapter three, the findings for these hypotheses' tests are summarised next.

5.7.1. Research hypothesis 1a

As found from the analysis done in SmartPLS 3, distributive justice had no significant mediating effect between transactional leadership and affect-based trust. Therefore hypothesis 1a was rejected.

5.7.2. Research hypothesis 1b

As found from the analysis done in SmartPLS 3, procedural justice had no significant mediating effect between transactional leadership and affect-based trust. Therefore hypothesis 1b was rejected.

5.7.3. Research hypothesis 1c

As found from the analysis done in SmartPLS 3, distributive justice had no significant mediating effect between transactional leadership and cognition-based trust. Therefore hypothesis 1c was rejected.

5.7.4. Research hypothesis 1d

As found from the analysis done in SmartPLS 3, procedural justice had no significant mediating effect between transactional leadership and cognition-based trust. Therefore hypothesis 1d was rejected.

5.7.5. Research hypothesis 2a

As found from the analysis done in SmartPLS 3, interactional justice had no significant mediating effect between transformational leadership and affect-based trust. Therefore hypothesis 2a was rejected.

5.7.6. Research hypothesis 2b

As found from the analysis done in SmartPLS 3, interactional justice had no significant mediating effect between transformational leadership and cognition-based trust. Therefore hypothesis 2b was rejected.

5.8. Conclusion

In summary, both construct validity as well as instrument reliability was checked and confirmed for the study. A test for normality was done and found to be violated for all latent constructs, which required a non-parametric test to be done to test for the relationships between the various latent constructs. For this analysis, PLS-SEM was used as proposed by Hair et al. (2019). Before the structural model was implemented in SmartPLS 3, a test for common method bias was conducted, using the single factor Harman's test. It was found that to reduce the likelihood of common method bias, the following indicator variables had to be removed for the analysis: TFL_5, TFL_9, TFL_10, IJM_1, IJM_5, IJM_6, ABT_2 and ABT_4.

The next part of the analysis focused on the quality of the structural model. The first criteria that was used to test for this was the adjusted R^2 , as recommended for reflectively measured latent constructs (Hair et al., 2020). This measurement indicates the predictive ability of the exogenous variable over the endogenous variables. It was found that the exogenous variables, transformational leadership and transactional leadership, had substantial indicative power to explain variance in affect-based trust, cognition-based trust and interactional justice. However, it was found that the exogenous variables had moderate to weak indicative power to explain variance in distributive justice and procedural justice. It is important to note that the predictive power over all of the endogenous variables was significant, with $p < 0.05$.

The next quality criteria used was that of the Stone-Geisser's Q^2 , which is an indication of the model's predictive power outside of the selected sample (Hair et al., 2011). From the results, it was found that the exogenous variables, those being transformational leadership and transactional leadership, had predictive power over the endogenous variables, those being, distributive justice, procedural justice, interactional justice, affect-based trust and cognition-based trust. Following the confirmation of the model's quality, the last part of the statistical analysis focused on the actual relationships between the latent constructs as part of the structural model, making use of a PLS-SEM in SmartPLS 3.

The first part of the analysis focused on the total mediating effect as it relate to the independent exogenous variables, mediated by the endogenous latent variables of organisational justice mechanisms and the effect that had on the endogenous dependant variables of affect-based trust and cognition-based trust. From the results, it was found that there was a total mediating effect from all exogenous latent constructs and all endogenous latent constructs, as mediated by the three organisational justice mechanisms when taken together. However, the total mediating effect from transformational leadership on affect-based trust and cognition-based trust, as mediated by the three organisational justice mechanisms, was not significant with $p > 0.05$. When delving deeper into the specific mediating effects, it was found that only one of the organisational justice mechanisms, interactional justice, had a significant mediating effect between the exogenous independent variable of transactional leadership, and the endogenous dependant variables of affect-based trust and cognition-based trust.

The next section presents the discussion of these results and how they may relate to the literature review from chapter two.

6. Discussion of research results

6.1. Introduction

This chapter focuses on the results and findings of the statistical analyses done and provided in chapter five together with the literature from chapter two. The first subsection focuses on the sample demographics in an effort to see how generalisable these findings are to the rest of the population of the study. Following this, the descriptive statistics for each of the latent constructs are discussed. Lastly, this chapter discusses the results and findings of the hypotheses tests conducted.

As stated in chapter five, an electronic survey was sent out to three organisations in South Africa, two of which were mobile operators and one being a prominent consulting company operating in South Africa and the rest of the world. The electronic survey was sent to 943 individuals and following data cleansing, there were 366 complete responses that could be used for the statistical analysis, achieving an overall response rate of 38.81%.

6.2. Sample demographics

The next section presents the findings determined from the demographic data collected. Age distribution of the respondents was the first demographic criteria that was collected and analysed. It was found that most respondents formed part of the age category “31 – 40”, contributing 39% to the total sample. The next largest age group was that of “41 – 50”, contributing 37% to the total sample, resulting in 76% of the sample falling within the age groups of “31 – 40” and “41 – 50”. When compared to the working population of South Africa, it was found that this distribution was fairly representative of the working population in South Africa (Stats SA, 2020).

Gender distribution was the next demographic variable evaluated. It was found that for the sample used in the statistical analysis, 34.97% were female, 63.66% were male and 1.37% preferred not to share their gender information. Recent published work has indicated that this is a fair representation of the general working population in South Africa (Adelekan & Bussin, 2018).

The next demographic variable evaluated was that of the management level distribution. This was important to note for two reasons: firstly, to establish support for the generalisability of the research findings and, secondly, to determine the proportion of individuals that would influence the perception of measurements as they relate to the

latent constructs used in this research. From the results, it was found that most respondents formed part of the Junior and Middle Management levels in the respective organisations, contributing 48.4% to the total population. Recent published work indicates that this is not such a fair representation of the general working population, with 92% forming part of the Junior and Middle Management levels (Adelekan & Bussin, 2018). However, this was found not to be a prominent concern, given that the research design focused on the perception of leadership, organisational justice mechanisms and trust mechanisms, and not on the relative management level in the organisation. As noted in chapter two, strategic leaders are those individuals in positions where they are empowered and expected to make decisions on how and where organisational resources are deployed (Samimi et al., 2020). This allocation of resources takes place at all levels of leadership in an organisation; however, the magnitude of such resource allocations increases the higher you move in the organisation.

The final demographic variable assessed was participants' tenure at their respective organisations. This was of importance given that individuals would build up trust in leadership over time within an organisation, as well as learn more and more about the relevant organisational procedures, as they are enforced, the longer they form part of an organisation (McAllister, 1995). From the results, it was found that 14% of the respondents had been with their respective organisations for "3 – 5 years", 27% had been there for "5 – 10 years", 19% had been there "10 – 15 years", and 12%, "longer than 15 years". This indicated that a significant amount of the respondents had been with their respective organisations for a sufficient period of time to build up trust with their leaders as well as learn about the relevant organisational procedures.

6.3. Leadership

Following an analysis of the two leadership constructs – transformational leadership and transactional leadership – it was found that transformational leadership scored the highest given the sample, with a mean score of 4.79. The mean score for transactional leadership was 4.53. Considering the cross sectional nature of the research, the researcher expected that the scores of these two leadership constructs would be close, due to the leadership continuum that exists between transformational leadership and transactional leadership (Vinger & Cilliers, 2006).

Furthermore, experienced and effective leaders' function on this continuum between transactional leadership and transformation leadership, adjusting their leadership styles to the relevant context at a specific point in time (Oc, 2018). It was therefore expected

that respondents would note a balanced view of the perceived leadership attributes displayed by their leaders.

6.4. Organisational justice mechanisms

Following an analysis of the three organisational justice mechanism constructs, being distributive justice, procedural justice and interactional justice, it was found that interactional justice scored the highest given the sample, with a mean score of 4.95. The mean scores for distributive justice and procedural justice were 3.96 and 4.00, respectively. Based on this initial analysis conducted, it was encouraging to see interactional justice scoring the highest out of the three organisational justice mechanisms, given that this was a third mediating mechanism included to build on the findings from Ng (2017).

Furthermore, it must be noted that interactional justice is more focused on the interactions between leaders and followers, versus that of distributive justice and procedural justice, which are more focused on the perception relative to the policies and procedures implemented by the relevant leaders in the context of the respective organisations (Moorman, 1991). The research questionnaire focused on the perspectives of individuals, relative to their leaders, which then supports the fact that interactional justice scored highest of all the organisational justice mechanisms (Moorman, 1991).

The relative mediating effect of the three organisational justice mechanisms are discussed below, focusing on the results in the context of the proposed hypotheses.

6.5. Trust mechanisms

Following an analysis of the two trust constructs (affect-based trust and cognition-based trust) it was found that cognition-based trust scored the highest given the sample, with a mean score of 5.21. The mean score for affect-based trust was 4.78. This may be supported by the fact that for affect-based trust to be present, cognition-based trust must first be present (Top & Tekingunduz, 2018). In other words, cognition-based trust is a requirement for affect-based trust to exist in the organisational context (Rousseau et al., 1998).

6.6. Discussion relating to each hypothesis

This subsection focuses on the findings presented for the hypotheses tested as part of the research process. As indicated earlier, the analysis was done using PLS-SEM, enabling the researcher to build a complex interrelated model, considering the seven latent constructs that were used in the study. From the SmartPLS 3 output, the researcher was able to determine which of the organisational justice mechanisms have a mediating effect between the components of leadership, being transactional and transformational leadership, and the components of trust, being affect-based trust and cognition-based trust, as proposed for this study.

6.6.1. Discussion relating to hypotheses 1a, 1b, 1c and 1d

Hypotheses 1a, 1b, 1c and 1d focused on the mediating effect of distributive and procedural justice, between transactional leadership and the components of trust, being affect-based trust and cognition-based trust. It is important to note that the work done by Ng (2017) only focused on transformational leadership and the mediating effect of distributive and procedural justice on trust, with trust being “trust in the organisation” and “trust in the leader”. This supports why transactional leadership was introduced into this study, with the aim to build and extend on existing literature.

Ng (2017) found that procedural justice had a positive mediating effect on both “trust in the organisation” as well as “trust in the leader”; however, distributive justice only had a positive mediating effect on “trust in the organisation” (Ng, 2017). Given the reference of the follower relevant to the organisation and leader, these results make sense in that distributive justice considers the fairness of the allocation of resources (Moorman, 1991), which one can argue is perceived at an organisational level. Furthermore, procedural justice refers to the fairness of the processes followed in allocation of those resources (Moorman, 1991), which one can argue is a function of the organisational procedures as well as the implementation of those procedures by the relevant leadership in the organisation.

As indicated earlier, Ng (2017) only focused on transformational leadership as an independent variable. In an effort to build on the findings from Ng (2017), the leadership style of transactional leadership was also introduced as an independent variable in this research. Furthermore, given the attribute of contingent reward for transactional leadership and the nature of distributive and procedural justice, which considers fair allocation of resources and the process followed for that allocation, it was therefore expected that both distributive justice and procedural justice would have a positive

mediating effect on both components of affect-based trust and cognition-based trust. However, the results from the structural model tested in SmartPLS 3 did not support any of those hypotheses as no significant specific mediating effect was found between transactional leadership and the components of trust, being cognition-based trust and affect-based trust, as mediated by distributive justice and procedural justice.

Furthermore, it is important to note that the researcher also did not find this mediating effect of distributive justice or procedural justice between transformational leadership and the trust components used in this research. Ultimately, neither distributive justice nor procedural justice had a positive mediating effect between the two leadership styles, transformational and transactional leadership, and the two components of trust, being affect-based and cognition-based trust.

Therefore, these findings can potentially be explained by the context within which this study was conducted, specifically at a time when COVID-19 had a significant impact on working behaviours of employees across organisations, with most people working from home and minimal face-to-face engagement was possible. As result of this, it can be that individuals did not feel as part of their organisations as they might have been before the pandemic and that trust mechanisms were affected by other elements in the organisational justice mechanisms, such as interactional justice. This leads us then to the role of interactional justice and the leadership style of transactional leadership which is discussed below.

6.6.2. Discussion relating to hypotheses 2a and 2b

Hypotheses 2a and 2b focused on the mediating effect of interactional justice, between transformational leadership and the components of trust, being affect-based trust and cognition-based trust. It is important to note that in the study of Ng (2017), only two mediating organisational justice mechanisms were considered, those being distributive justice and procedural justice.

Therefore, heading the call of Ng (2017) to delve deeper into how different types of organisational justice mechanisms influence different types of trust (Ng, 2017, p. 403), interactional justice was added as the third mediating endogenous latent construct for this study. Interactional justice considers the fairness of the manner in which procedures are implemented, with the focus of this implementation being on the leader, and less so on the organisation (Moorman, 1991). The aim of adding interactional justice as an

additional mediating organisational justice mechanism was to extend on the work done by Ng (2017).

As discussed in chapter five, results show that there was a positive total mediating effect from all organisational justice mechanisms, between the two independent exogenous variables of transformational leadership and transactional leadership, and the dependant endogenous variables of affect-based trust and cognition-based trust. Importantly, this was when the mediating effect of all mediating endogenous variables were combined, hence the “total indirect effect” output used from SmartPLS 3. It was found that all of these effects were significant, with $p < 0.05$, except for the total mediating effect between transformational leadership and cognition-based trust and affect-based trust, $p > 0.05$. Given these findings for the total mediating effect of all organisational justice mechanisms, and taking into consideration the findings for hypotheses 1a, 1b, 1c and 1d, it seems that mediation may have been affected by one specific component of organisational justice. Therefore, this is discussed for interactional justice in the next section.

As mentioned earlier, these initial findings required the researcher to delve deeper into the specific mediating effects of the three organisational justice mechanisms, those being distributive justice, procedural justice and interactional justice. As discussed in chapter five, it was found that only one organisational justice mechanism, interactional justice, had a significant mediating effect between the exogenous latent construct of transactional leadership, and the two endogenous latent constructs, being cognition-based trust and affect-based trust, with $p < 0.05$. The specific mediating effects for both distributive justice and procedural justice were close to zero and not significant, $p > 0.05$. This further supports the potential reason why distributive and procedural justice had no specific mediating effect between the two constructs of leadership and the two constructs of trust, as explained with hypothesis one above. However, it is important to note that this was only hypothesised for transactional leadership and not transformational leadership, as Ng (2017) already found that transformational leadership had a positive effect on trust, as mediated by distributive and procedural justice. Therefore, findings from this study show that neither transactional leadership, nor transformational leadership had a positive effect on the components of trust, being affect-based trust and cognition-based trust, as mediated by distributive and procedural justice.

Results therefore indicate that interactional justice was the only mediating variable that had a positive effect between transactional leadership and the components of trust,

being affect-based trust and cognition-based trust. This can potentially be explained by the fact that leadership in an organisation is about influence, with this influence being that of the leaders on their followers (Lee et al., 2017). Followers perceive the implementation of organisational justice to be facilitated by their leaders, especially in the case of distributive and procedural justice, which are mainly focused on the organisational level justice mechanisms but implemented by leaders in the organisation.

Therefore, given the findings of this study, as well as the context within which it was conducted, transactional leadership and interactional justice played an overriding role on trust between followers and their leaders. As discussed in chapter two, this can further be supported by Martin et al. (2018) who found that a significant portion of leadership research is based on intra-person mediation models, hence the important role that Leader-Member Exchange Theory plays as part of the theoretical foundation of this study (Martin et al., 2018). As explained in the literature review, leader-member exchange is important because of the exchange relationships that exist between leaders and their followers. A practical example of this would be if an employee performs their job function to a satisfactory level, he/she would be rewarded for that at the end of the month in the form of a salary, linking in well with the contingent reward attribute of transactional leadership.

Furthermore, the manner in which procedures are implemented by leaders is also supported by truthfulness and justification (Colquitt & Rodell, 2011; Colquitt & Zippay, 2015) which in turn can be supported by the attributes of transactional leadership, being contingent reward and management-by-exception. As the findings show here, interactional justice plays a key role in facilitating the perception of organisational fairness as communicated by leaders in an organisation to their followers. The context of this study is discussed in more detail below.

This study was conducted at a time when COVID-19 had an extreme impact on working behaviours of employees across organisations, with most people working from home and minimal face-to-face engagement was possible. Given this context, it would be prudent to define what an extreme event is, that being “*a discrete episode or occurrence that may result in an extensive and intolerable magnitude of physical, psychological or material consequences to or in close physical or psycho-social proximity to organisation members*” (Hannah et al., 2009). These results may indicate that the attributes of transactional leadership, being management-by-exception and contingent reward, together with the mediating effect of interactional justice, which focuses on the manner

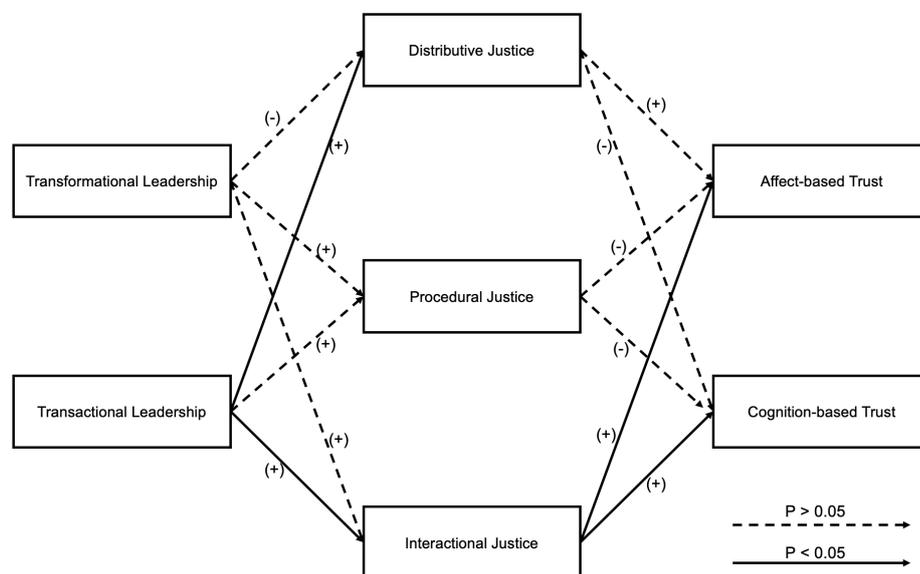
in which communication is done by leaders, are critical to support trust mechanisms during a time of such extreme uncertainty. These findings also suggest that the expectations of followers change if the context change. Therefore, these findings also give guidance to leaders in organisations as to how to communicate with their followers during such an uncertain time, as with the COVID-19 pandemic.

6.7. Conclusion

As discussed in this chapter, the research findings suggest that interactional justice plays a key role in building trusting working relationships between leaders and followers. It was found that interactional justice had a significant mediating effect between the latent construct of transactional leadership and the two latent constructs of trust, being affect-based trust and cognition-based trust. These findings are of particular interest, given the context within which this study was conducted, as mentioned earlier, and is discussed in more detail of part of chapter seven.

These findings are reflected in the updated theoretical model and can be seen in diagram below.

Figure 8: Updated model capturing findings from the research

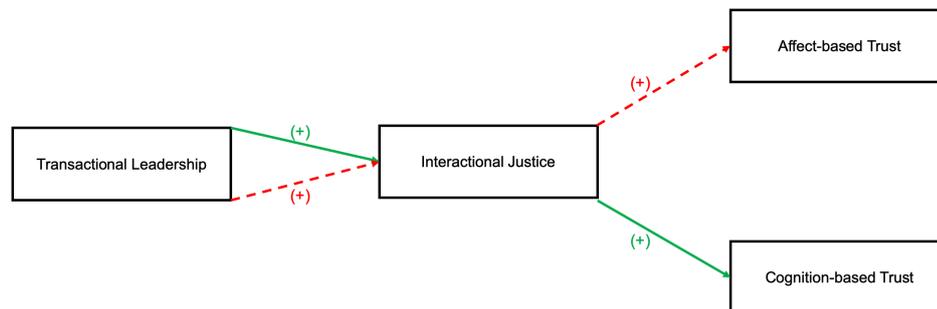


As reflected in the model above, it was found that the attributes of transactional leadership as mediated by interactional justice and the effect that had on affect-based trust and cognition-based trust was significant. As explained above, these findings may

have been influenced by the extreme context within which this study was conducted, as such providing leaders valuable insights into the effect of such events and how their leaderships styles can be adjusted to better support the formation of trust between leaders and followers.

Therefore, as summarised in the figure below, the only organisational justice mechanism that had a significant mediating effect between transactional leadership and the components of trust, was that of interactional justice.

Figure 9: Final model indicating relationships that were found to be significant



7. Conclusion

7.1. Introduction

The aim of this research was to build and extend on existing literature whilst focusing on the constructs of transformational leadership, transactional leadership, distributive justice, procedural justice, affect-based trust and cognition-based trust. The work done by Ng (2017) was used as the entry point into this complex discussion. Ng (2017) found that transformational leadership was only mediated by certain components of organisational justice mechanisms as it influenced two components of trust, those being “trust in the organisation” and “trust in the leader” (Ng, 2017). As a result of these findings, Ng (2017) called for further research with the aim of “*disentangling the effects of different types of justice on different types of trust*” (Ng, 2017, p. 403), hence the research was embarked on.

The sample that was used for this study consisted of 366 individuals that formed part of three well known organisations in South Africa. As discussed in chapter six, the sample was found to be a good representation of the gender distribution for the working population in South Africa, with 34.97% of respondents reporting to be female, 63.66% of the respondents reporting to be male and 1.37% preferring not to share their gender information (Adelekan & Bussin, 2018; Stats SA, 2020). Furthermore, it was found that for the sample, 72.68% of respondents formed part of the Junior, Middle and Senior Management levels in their respective organisations.

Furthermore, this study was conducted within a unique context of South Africa, during a period when COVID-19 played a significant role in the way of working and engagement processes between leaders and followers. This unique context can be described in two parts, the first being the effect of the COVID-19 pandemic, which considers the way of working and changes in engagement models between leaders and followers, and secondly, the unique context of South Africa where trust between individuals has been influenced by a history of apartheid and one of the highest Gini coefficients in the world (Nkomo & Kriek, 2011). This low level of trust in South Africa further supports the notion that follower needs are drawn to transactional leadership attributes, given the transparency and clarity it provides, as supported by the findings of this study.

The next section focuses on the theoretical implications, given the research findings as conducted here. These theoretical implications focus on two main subheadings, the first being the introduction of transactional leadership as a second independent variable and

secondly, the introduction of interactional justice as a third mediating variable. In addition to the inclusion of these two latent constructs, the components of trust that were introduced into this research as dependant variables, were affect-based trust and cognition-based trust. As noted earlier, the dependant variables that formed part of the work done by Ng (2017) were (i) “trust in the leader” and, (ii) “trust in the organisation”. The reason why affect-based trust and cognition-based trust were introduced into this study was because of the inter-personal nature of leadership for which trust is made up mainly by affect-based trust and cognition-based trust (McAllister, 1995) as well as the call from Ng (2017) to investigate the impact of leadership, as mediated by organisational justice mechanisms, on different types of trust (Ng, 2017).

Furthermore, this notion is supported by the theoretical foundation of this study as discussed in chapter two, in that leader-member exchange plays a critical role in leadership research which is based on intra-person mediation models (Martin et al., 2018). As explained in the literature review, leader-member exchange is important because of the exchange relationships that exist between leaders and their followers. A practical example of this would be if an employee performs their job function to a satisfactory level, he/she would be rewarded for that at the end of the month in the form of a salary, linking in well with the contingent reward attribute of transactional leadership.

7.2. Theoretical implications

The theoretical implications of this research are that it extends on the work done by Ng (2017), finding that the latent construct of interactional justice is a critical component of organisational justice and its impact on building trusting relationships between leaders and followers. It is therefore recommended that future research considers interactional justice along with distributive justice and procedural justice.

Another important implication is the role that spatial and temporal context plays in the relationship between leadership and trust. As noted earlier, even though Ng (2017) found a positive mediating effect of distributive and procedural justice between transformational leadership and trust, the study conducted in this unique context provides new theoretical insights.

7.3. Contribution

The theoretical contribution from this research was achieved through the introduction of two additional latent constructs, the first being transactional leadership as an independent variable and interactional justice as a third mediating variable. Given the

complex nature of the structural model proposed, a PLS-SEM was proposed as the statistical analysis method (Hair et al., 2011).

The results for hypothesis one from the statistical analysis showed that transactional leadership had no significant effect on cognition-based trust and affect-based trust, as mediated by distributive and procedural justice. Furthermore, it was also found that for this study, transformational leadership had no significant effect on cognition-based trust and affect-based trust, as mediated by distributive and procedural justice.

This is in contrast to what Ng (2017) found, that transformational leadership had a positive effect on “trust in the organisation” and “trust in the leader”, as mediated by procedural justice. In addition to this, Ng (2017) also found that transformational leadership had had a positive effect on only “trust in the organisation”, as mediated by distributive justice. For this reason, it was expected that both transformational leadership and transactional leadership would have a positive effect on cognition-based trust and affect-based trust, as mediated by distributive justice and procedural justice. This was, however, not found to be the case.

The results for hypothesis two from the statistical analysis done, showed that transformational leadership had no significant effect on cognition-based trust and affect-based trust, as mediated by interactional justice. In addition to the findings from this hypothesis, it was however found that transactional leadership had a significant effect on cognition-based trust and affect-based trust, as mediated by interactional justice. Given that interactional justice considers the fairness of the manner in which procedures are implemented (Moorman, 1991), with this implementation being done by the leadership in an organisation; it made sense that the attributes of transactional leadership, being contingent reward and management-by-exception, would be supportive of fairness in the organisation (Vinger & Cilliers, 2006). The alignment of the attributes of transactional leadership and the foundation of interactional justice therefore further supports the findings of this study, showing that transactional leadership had a significant mediating effect on cognition-based trust and affect-based trust, as mediated by interactional justice.

7.4. Implications for management

Given the theoretical implications and contribution as outlined above, the implications for management are summarised next. It has long been evangelised that leadership plays a critical role in the success of an organisation (Bass et al., 1987; Osborn & Marion,

2009). The results from this study have shown that the manner in which leaders explain and communicate with clarity, the organisational justice mechanisms, are of critical importance to not only build affect-based trust, but also cognition-based trust between leaders and their followers, especially during a time of extreme uncertainty as a result of something like COVID-19.

Therefore, given the context within which this research was conducted, at a time of extreme uncertainty and new ways of working as a result of COVID-19, the findings from this research may indicate that the attributes of transactional leadership and interactional justice become more important. Furthermore, given this same context, it may also show that the manner in which communication of expectations and rewards are handled is of critical importance to build trust between leaders and followers, as supported by the positive mediating effect of interactional justice.

Given the importance of interactional justice, it is of value to revisit the indicator variables that made up this latent construct as adapted from Moorman (1991), those being:

- (i) "My leader is able to suppress personal biases."
- (ii) "My leader provides me with timely feedback about decisions made and its implications."
- (iii) "My leader treats me with kindness and consideration".

In addition to this, it will also be of value to revisit the indicator variables for transactional leadership as adapted from McAllister (1995):

- (i) "My leader tells me what I need to do, to be rewarded for my work."
- (ii) "My leader is satisfied when I meet agreed-upon standards of work."
- (iii) "My leader recognises/rewards me when I achieve my goals."
- (iv) "As long as things are working, my leader will not change anything."
- (v) "My leader calls attention to what others and I can get for what we accomplish."
- (vi) "My leader tells our team and me the standards we have to abide by to carry out our work."

Therefore, considering these indicator variables as set out above, it is clear that procedures and formal processes on their own are not sufficient to support perceived organisational justice, especially during a time of extreme uncertainty. Given the research findings, it is clear that it is the responsibility of leaders in an organisation to communicate effectively and clearly to their followers at all times, and in doing so build

trust within the organisation, allowing employees to put themselves in a position of vulnerability, with the expectation that positive outcomes will be achieved. Leaders are therefore required to (i) show their followers that their needs as leaders come second to that of their followers, (ii) given the extreme context, act with kindness and consideration towards their followers and, (iii) communicate with clarity what is expected of their followers, focusing on being task orientated. In doing so, strong trust relationships will be built between leaders and their followers.

7.5. Limitations

Considering the research design and methodology used for this study, it is important to acknowledge the limitations that exist. The first limitation to consider is that the research was conducted by a novice researcher. In an effort to try and reduce the impact of this limitation, a pilot survey was done as stated earlier. This enabled the researcher to confirm that the questionnaire was suitable for the research.

Another limitation of the research was that it was conducted in English, which was not the first language for a number of the individuals that took part in the survey. However, as part of the pilot survey, feedback from respondents were used to improve on the questionnaire (Creswell & Creswell, 2018).

Furthermore, because the questionnaire was performed at a static point in time, there was a risk that the participant mood may affect their responses during the survey. As an example, their leader might have had to reprimand the participant for work not done, which in turn can influence the participant's perception of the leadership style exhibited at that point in time as well as the perceived organisational justice mechanisms. It may have been possible to mitigate this negative effect by performing a longitudinal study, but given the time constraints for the research, that was not feasible (Creswell & Creswell, 2018). Such a longitudinal study would also potentially mitigate some of the extreme effects of COVID-19 and the role it played on the perceptions of leadership, organisational justice mechanisms and trust in the context of this study.

7.6. Suggestions for future research

It is expected that cognition-based trust and affect-based trust would increase over time, as individuals work together for longer periods of time and in the same organisation. Therefore, for future research, it is proposed that the research design consider a multi group analysis taking into account (i) the tenure of the employee at the organisation and (ii) the duration the follower has been working for a specific leader. In doing so, this will

potentially highlight any effect of leadership on trust as mediated by the three organisational justice mechanisms considering the duration of those working relationships between leaders and followers.

In addition to a multi group analysis proposed here, it is also recommended that a longitudinal design be considered. Such a longitudinal study would potentially influence the relative perceptions of leadership, organisational justice mechanisms and trust over time, which in turn affect the results differently. Furthermore, given the potential impact that COVID-19 may have had on the findings of this study, it would be beneficial to replicate this study at a future point in time when this may not have such a big impact on the findings.

8. References

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Appendix 1: Consistency matrix

Table 30: Consistency matrix

Research Hypothesis	Literature Review	Data Collection Tool	Analysis
RH1a: Distributive justice has a positive mediating effect between transactional leadership and affect-based trust	(Moorman, 1991) (McAllister, 1995) (Vinger & Cilliers, 2006)	Online research questionnaire	PLS-SEM
RH1b: Procedural justice has a positive mediating effect between transactional leadership and affect-based trust	(Moorman, 1991) (McAllister, 1995) (Vinger & Cilliers, 2006)	Online research questionnaire	PLS-SEM
RH1c: Distributive justice has a positive mediating effect between transactional leadership and cognition-based trust	(Moorman, 1991) (McAllister, 1995) (Vinger & Cilliers, 2006)	Online research questionnaire	PLS-SEM
RH1d: Procedural justice has a positive mediating effect between transactional leadership and cognition-based trust	(Moorman, 1991) (McAllister, 1995) (Vinger & Cilliers, 2006)	Online research questionnaire	PLS-SEM
RH2a: Interactional justice has a positive mediating effect between transformational leadership and affect-based trust	(Moorman, 1991) (McAllister, 1995) (Vinger & Cilliers, 2006)	Online research questionnaire	PLS-SEM
RH2b: Interactional justice has a positive mediating effect between transformational leadership and cognition-based trust	(Moorman, 1991) (McAllister, 1995) (Vinger & Cilliers, 2006)	Online research questionnaire	PLS-SEM

Source: Author's compilation

Appendix 2: Ethical Clearance

**Gordon Institute
of Business Science**
University of Pretoria

**Ethical Clearance
Approved**

Dear Schalk Visser,

Please be advised that your application for Ethical Clearance has been approved.

You are therefore allowed to continue collecting your data.

We wish you everything of the best for the rest of the project.

[Ethical Clearance Form](#)

Kind Regards

This email has been sent from an unmonitored email account. If you have any comments or concerns, please contact the GIBS Research Admin team.

Appendix 3: Example of consent statement

Hi there,

As part of my academic studies, I am conducting research on why only certain components of the trust- and justice mechanisms mediate the effect leadership styles have on employees.

To that end, you are requested to complete the following survey. This will help us better understand the influence that leadership styles have on different components of trust- and justice mechanisms. The questionnaire should take no more than 10 minutes to complete.

Your participation is voluntary, and you can withdraw at any time without penalty. Your participation is anonymous and only aggregated data will be reported. By completing the survey, you indicate that you voluntarily participate in this research. If you have any concerns, please contact me, my contact details are provided below.

Researcher Name: Schalk W.J. Visser

Email: schalk.visser@gmail.com

Phone: +27 84 777 7448

Appendix 4: Sample of questionnaire used for data collection

Hi there,

As part of my academic studies, I am conducting research on why only certain components of the trust- and justice mechanisms mediate the effect leadership styles have on employees. To that end, you are requested to complete the following survey. This will help us better understand the influence that leadership styles have on different components of trust- and justice mechanisms.

The questionnaire should take no more than 10 minutes to complete.

Your participation is voluntary, and you can withdraw at any time without penalty. Your participation is anonymous and only aggregated data will be reported. By completing the survey, you indicate that you voluntarily participate in this research.

If you have any concerns, please contact me, my contact details are provided below.

Researcher Name: Schalk W.J. Visser

Email: schalk.visser@gmail.com

Phone: +27 84 777 7448

Demographic Data

DD_1 Gender

- Female (1)
- Male (2)
- Other (4)
- Rather not say (5)

DD_2 Age

- 20-30 (1)
- 31-40 (2)
- 41-50 (3)
- 51-60 (4)
- Older than 60 (5)

DD_3 Years of service at the company

- 0-3 years (1)
- 3-5 years (2)
- 5-10 years (3)
- 10-15 years (4)
- longer than 15 years (5)

DD_4 Managerial level

- Junior Management (1)
- Middle Management (2)
- Senior Management (3)
- Executive Management (4)
- Not Applicable (5)

Transformational (TFL) and Transactional (TRC) Leadership

TFL_1 My leader makes me feel good about myself

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TFL_2 My leader provides a clear indication of what I could and should do at work

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TFL_3 My leader encourages me to think about old problems in new ways

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TFL_4 My leader helps me and others to develop themselves

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TRC_1 My leader tells me what I need to do, to be rewarded for my work

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TRC_2 My leader is satisfied when I meet agreed-upon standards of work

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TFL_5 I have complete faith in my leader

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TFL_6 My leader provides appealing images about what we can achieve as a team/organisation

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TFL_7 My leader provides me with new ways of approaching a problem or task

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TFL_8 My leader asks me how I am doing

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TRC_3 My leader recognises/rewards me when I achieve my goals

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TRC_4 As long as things are working, my leader will not change anything

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TFL_9 I am proud to be associated with my leader

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TFL_10 My leader helps me find meaning in my work

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TFL_11 My leader gets our team to rethink ideas that have never been questioned before

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TFL_12 My leaders gives personal attention to others who seem rejected

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TRC_5 My leader calls attention to what others and I can get for what we accomplish

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

TRC_6 My leader tells our team and me the standards we have to abide by to carry out our work

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

Distributive- (DJM), Procedural- (PJM) and Interactional (IJM) Justice

DJM_1 I am fairly rewarded, given my responsibilities

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

DJM_2 I am fairly rewarded, given the amount of experience I have

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

DJM_3 I am fairly rewarded, given the amount of effort I put forth

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

DJM_4 I am fairly rewarded, for work that I have done well

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

DJM_5 I am fairly rewarded, for the stresses and strains of my job

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

PJM_1 Our company procedures are designed to collect accurate information necessary for making decisions

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

PJM_2 Our company procedures are designed to provide opportunities to appeal or challenge the decision

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

PJM_3 Our company procedures are designed to have all sides affected by the decision represented

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

PJM_4 Our company procedures are designed to generate standards so that decisions could be made with consistency

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

PJM_5 Our company procedures are designed to hear the concerns of all those affected by the decision

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

PJM_6 Our company procedures are designed to provide useful feedback regarding decisions made and the implementation thereof

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

PJM_7 Our company procedures are designed to allow for requests for clarification or additional information about a decision

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

IJM_1 My leader considers my viewpoint

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

IJM_2 My leader is able to suppress personal biases

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

IJM_3 My leader provides me with timely feedback about decisions made and its implications

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

IJM_4 My leader treats me with kindness and consideration

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

IJM_5 My leader shows concern for my rights as an employee

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

IJM_6 My leader takes steps to deal with me in a truthful manner

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

Affect-based Trust (ABT) and Cognition-based Trust (CBT)

ABT_1 My leader and I have a sharing relationship. We can both freely share our ideas, feelings and hopes

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

ABT_2 I can talk freely to my leader about difficulties I am having at work and know that (s)he will want to listen

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

ABT_3 My leader and I would both feel a sense of loss if one of us was transferred and we could no longer work together

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

ABT_4 If I shared my problems with my leader, I know (s)he would respond constructively and caringly

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

ABT_5 I would have to say that my leader and I have both made considerable emotional investment in our working relationships

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

CBT_1 My leader approaches his/her job with professionalism and dedication

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

CBT_2 Given the leader's track record, I see no reason to doubt his/her competence and preparation for the job

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

CBT_3 I can rely on my leader not to make my job more difficult by careless work

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

CBT_4 Most people, even those who aren't close friends, trust and respect my leader as a co-worker

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

CBT_5 Other work associates of mine who must interact with my leader, trust and respect him/her to be trustworthy

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

CBT_6 If people knew more about my leader and his/her background, they would be more concerned and monitor his/her performance more closely**

1 – Very Strongly Disagree, 2, 3, 4, 5, 6, 7 – Very Strongly Agree

**** Item CBT_6 was reverse coded**

Appendix 5: Test for normality – Histogram plots

Figure 10: Transformational Leadership (TFL) histogram plot

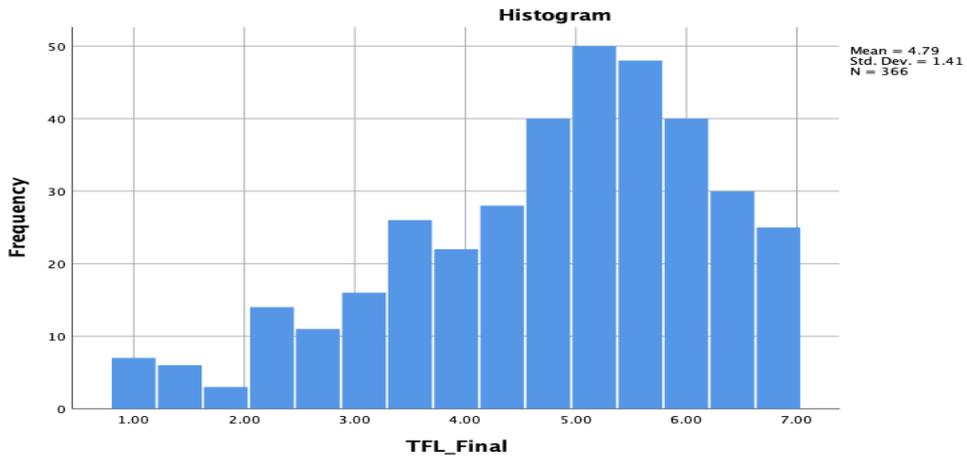


Figure 11: Transactional Leadership (TRC) histogram plot

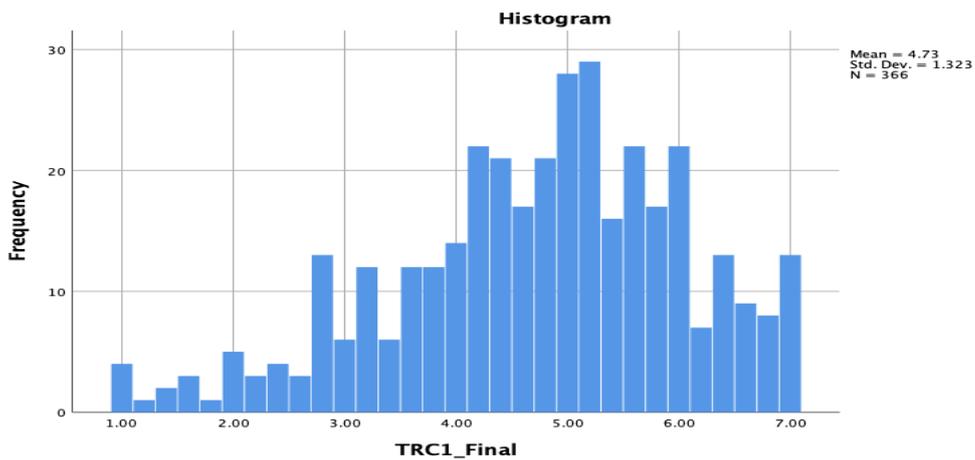


Figure 12: Distributive Justice (DJM) histogram plot

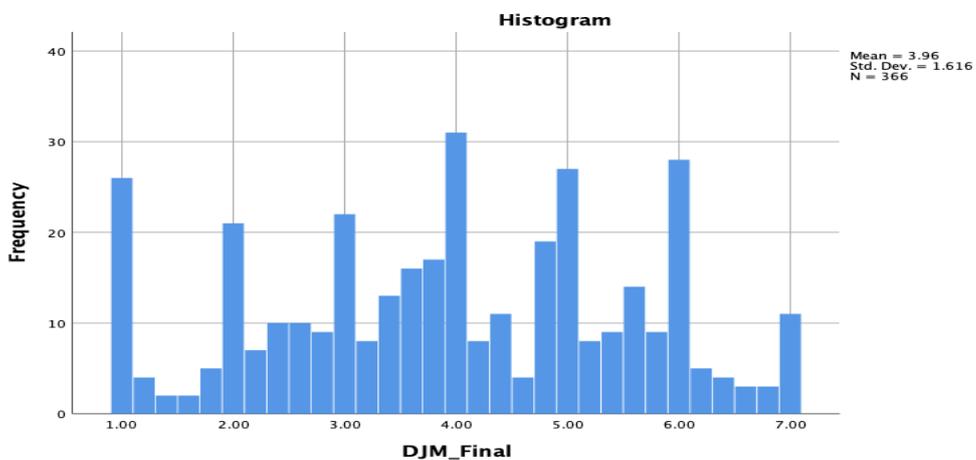


Figure 13: Procedural Justice (PJM) histogram plot

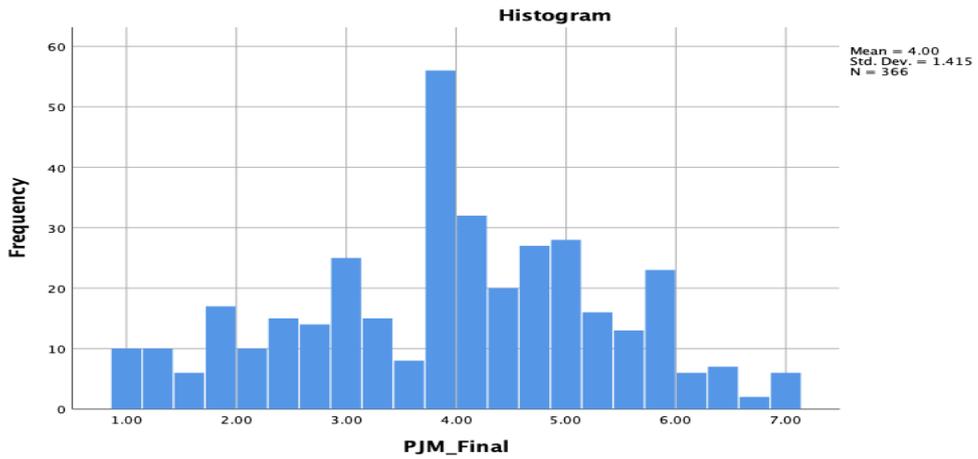


Figure 14: Interactional Justice (IJM) histogram plot

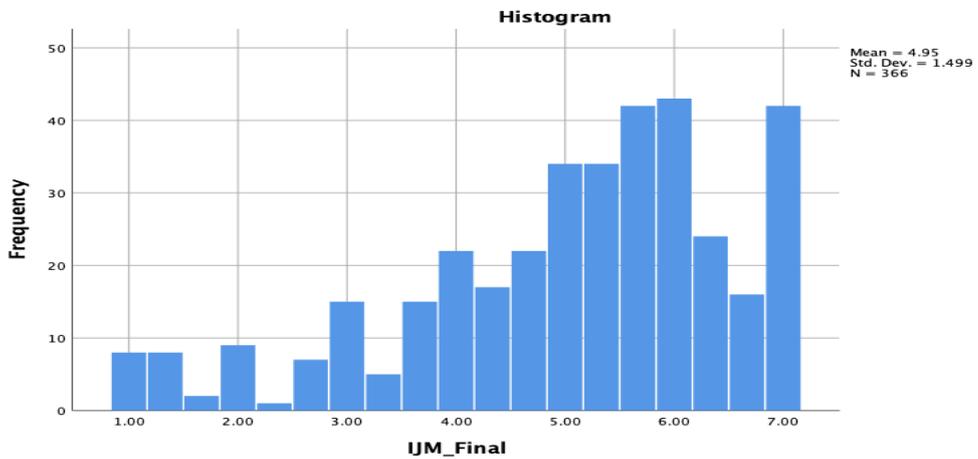


Figure 15: Affect-based Trust (ABT) histogram plot

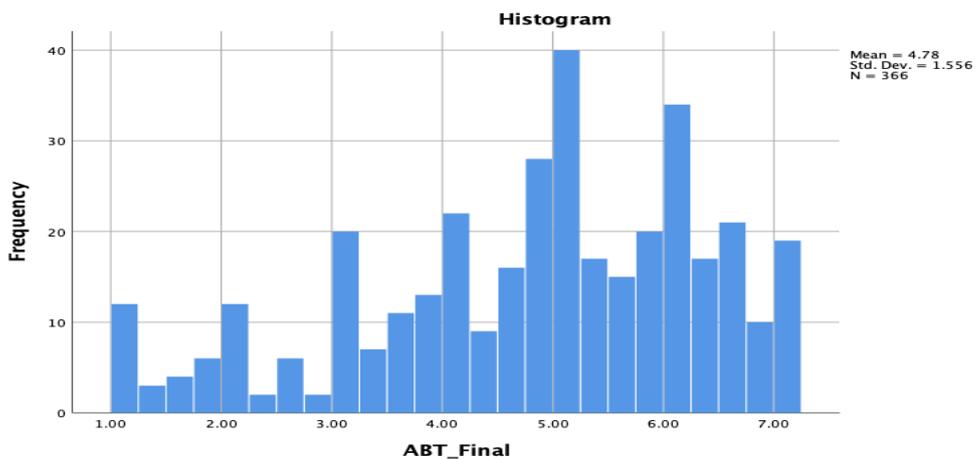


Figure 16: Cognition-based Trust (CBT) histogram plot

