

Trust within the work context: Conceptualisation, measurement and outcomes

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DECLARATION BY STUDENT

The article format was chosen for this study. The researcher, M.M. Heyns, conducted the research and wrote the manuscripts. Prof. Ian Rothmann acted as promoter. Three manuscripts were written and were published/submitted for publication.

I declare that "Trust within the work context: Conceptualisation, measurement and outcomes" is my own work and that all the sources that I have used or quoted are indicated and acknowledged by means of complete references.

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Manuscript 3, Chapter 1 and 5 and the front pages of the research study
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for MM Heyns for the purpose of submission as a postgraduate thesis.
Changes were suggested and implementation was left to the discretion of
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Regards,

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SUMMARY

Subject: Trust within the work context: Conceptualisation, measurement and outcomes

Key words: Trust, propensity, trustworthiness, self-determination, work engagement, turnover intention

Research concerning trust relationships on the interpersonal level, particularly when studied in dyadic relationships from the follower's point of view, is relatively scarce. Only a few researchers have attempted to link multiple dimensions of trust in the same study.

The general aim of this thesis was to examine the nature, measurement and impact of trust within the work context. More specifically, the thesis tests the measurement invariance of a selected trust measurement instrument for male and female South African employees. Thereafter, the interplay between predictors of trust and trust itself is investigated. The thesis concludes with the testing of a structural model that identifies the nature of relationships between trust, psychological needs satisfaction, work engagement and intentions to quit. Throughout the study, the focus is on dyadic relationships where the direct leader is the foci of trust.

A cross-sectional survey design was used to gather the data. Two convenience samples were taken of 539 and 252 respondents respectively. The Behavioural Trust Inventory, the Work-related Basic Need Satisfaction Scale, the Work Engagement Scale and the Turnover Intention Scale were administered.

The results of study 1 confirmed configural, metric and partial scalar invariance of the Behavioural Trust Inventory across gender. One item that measures one's willingness to share personal beliefs with a leader demonstrated a lack of scalar invariance for female managers. Results for this item should therefore be treated with caution. Latent factor mean analyses revealed no significant differences between male and female managers on the trust scales.

Results for study 2 confirmed the distinctness of trust propensity, trustworthiness and trust as separate main constructs. Trust was strongly associated with trustworthiness beliefs. Trustworthiness beliefs fully mediated the relation between trust propensity and trust. The observed relations between trust propensity and trustworthiness suggest that individuals with

a natural predisposition to trust others will be more inclined to perceive a specific trust referent as trustworthy.

Results for study 3 provided support for a model in which disclosure-based trust in a focal leader predicts satisfaction of self-determination needs and engagement, but it did not have a statistically significant direct effect on intentions to leave. Mediation analyses revealed that satisfaction of the need for autonomy facilitates the influence of trust on work outcomes, so that the impact of disclosure on engagement becomes more powerful and that it can effectively serve as a pathway to reduce intentions to quit.

Recommendations for future research are made.

OPSOMMING

Onderwerp: Vertroue binne die werkskonteks: Konseptualisering, meting en uitkomstes

Sleutelwoorde: Vertroue, vertrouensgeneigdheid, vertrouenswaardigheid, self-beskikking, werksbegeestering, voornemens om te bedank

Navorsing oor vertrouensverhoudings op interpersoonlike vlak, veral binne ongelyke magsverhoudings vanuit die perspektief van die ondergeskikte, is relatief skaars. Slegs enkele navorsers het al gepoog om die impak van veelvuldige dimensies van vertroue in een studie met mekaar te verbind.

Die algemene doelwit van hierdie tesis was om die aard, meting en uitwerking van vertroue binne die werkskonteks te ondersoek. Die tesis toets in die besonder die metingsinvariansie van 'n gekose vertrouensmeetinstrument vir manlike en vroulike Suid-Afrikaanse werknemers. Daarna is die wisselwerking tussen voorspellers van vertroue en vertroue as sodanig ondersoek. Die tesis sluit af met die toetsing van 'n strukturele model wat die aard van die verhouding tussen vertroue, psigologiese behoeftebevrediging, werksbegeestering en intensie om te bedank identifiseer. Die fokus is deurgaans op die ongelyke gesagsverhouding waar die leier die direkte fokus van vertroue is.

'n Deursnee-opname ontwerp is gebruik om die data in te samel. Twee gerieflikheidsteekproewe is geneem van 539 en 252 respondente onderskeidelik. Die *Behavioural Trust Inventory*, die *Work-related Basic Need Satisfaction Scale*, die *Work Engagement Scale* en die *Turnover Intention Scale* is toegepas.

Die resultate van studie 1 het die konfigurale-, metrieke- en skalaarinvariansie van die *Behavioural Trust Inventory* bevestig. Een item wat die respondent se gewilligheid om persoonlike oortuigings met die leier te deel meet, het 'n gebrek aan skalaarinvariansie getoon by vroulike respondente. Die resultate vir hierdie item moet dus met omsigtigheid hanteer word. Latente faktorgemiddelde-analise het geen beduidende verskille tussen manlike en vroulike respondente op die vertrouenskale getoon nie.

Die resultate vir studie 2 bevestig die afsonderlikheid van vertrouensgeneigdheid, vertrouenswaardigheid en vertroue as afsonderlike hoofkonstrukte. Vertroue is sterk in verband gebring met vertrouenswaardigheidspersepsies.

Vertrouenswaardigheidssoortuigings het die verband tussen vertrouensgeneigdheid en vertroue ten volle gemedieer. Die waargenome verband tussen vertrouensgeneigdheid en vertrouenswaardigheidspersepsies blyk te toon dat individue met 'n natuurlike predisposisie om te vertrou meer geneig sal wees om 'n spesifieke vertrouensreferent as betroubaar te sien.

Die resultate vir studie 3 ondersteun 'n model waarin openbaringsgebaseerde vertroue in 'n leier die bevrediging van self-beskikkingsbehoefte en betrokkenheid voorspel, maar dit het nie 'n statisties beduidende direkte effek gehad op intensie om te bedank nie. Mediasie-analise het getoon dat die bevrediging van die behoefte aan outonomie die invloed van vertroue op werksuitkomst fasiliteer sodat die impak van bekendmaking meer kragtig raak en gevolglik kan dien as 'n benaderingswyse wat kan help om intensies om te bedank te verminder.

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CHAPTER 1: INTRODUCTION, PROBLEM STATEMENT AND OBJECTIVES

This thesis examines the nature, measurement and impact of trust within the work context. It specifically focuses on employee trust in the direct leader and investigates potential pathways through which trust promotes work engagement as opposed to intentions to quit.

Chapter 1 contains the background and formulation of the research problem, followed by a description of the research objectives, research method and chapter layout.

1.1 Background

An established body of research demonstrates that interpersonal workplace trust has a measureable impact on corporate performance (Covey 2006; Galford & Drapeau, 2009; Lämsä & Pučetaité, 2006; Lewicki, Tomlinson, & Gillespie, 2006). Studies link trust to the financial health of a company (Delahaye Paine, 2003), increased market valuation and financial performance (Ferrin & Gillespie, 2010; Lewicki et al., 2006), profitability (Covey, 2006; Davis, Schoorman, Mayer, & Tan, 2000), higher dividend payments to shareholders (Covey, 2006) and higher share price (Delahaye Paine, 2003; Gillespie & Mann, 2004). Even small improvements leading to increased trust among role-players at various levels within an organisation can result in significant improvements in bottom line results (Ball, 2009). The link between trust and corporate performance is also confirmed by research within a South African business context (Carstens & Barnes, 2006).

At an operational level, research has convincingly established a relationship between interpersonal trust as it exists among co-workers and/or between employees and their leaders, and several desirable organisational outcomes (Burke, Sims, Lazzara, & Salas, 2007; Colquitt, Lepine, & Wesson, 2011; Dirks & Ferrin, 2002). Interpersonal trust has either direct and/or indirect effects on work performance, job satisfaction, organisational commitment, commitment to leader decisions, citizenship behaviours and intentions to leave (Colquit et al., 2011, Dirks & Ferrin, 2002; Ferrin, Dirks, & Shah, 2006; Ferrin & Gillespie, 2010; Semerciöz, Hassan, & Aldemir, 2011).

At the individual and interpersonal level, high trust relationships among employees are associated with higher productivity and increased loyalty to the organisation. It also facilitates internal cooperation, information sharing, effective communication (Dirks & Ferrin, 2002; Lau, Lam, & Salamon, 2008) and innovativeness (Heyns & Jeary, 2013; Semerciöz et al., 2011). Intra-organisational interpersonal trust is regarded as a form of social capital that

builds organisational excellence and provides a competitive advantage (Kramer, 2006; Lämsä & Pučetaité, 2006).

The modern workplace has undergone some dramatic changes that has reduced reliance on traditional bases of power derived from formal positions of authority. Drivers of change such as globalisation, increasing diversity and technological innovations brought about an increased emphasis on the interaction and self-directedness of employees, as well as more flexible team-based, temporary work structures that are more difficult to exercise control over (Green, 2012; Grey & Garsten, 2001; Robbins, Judge, Odendaal, & Roodt, 2009). These changes have led to an increased reliance on trust as a mechanism to coordinate and control interdependent activities, for in such a complex environment it is impossible to contract everything (Gambetta, 2008; Tichy & Bennis, 2007). The ability to establish, nurture and restore trust is a key competency vital to leadership success and survival in the new global economy (Covey, 2006; Green 2012; Salamon & Robinson, 2008). It is therefore essential that leaders should be able to determine whether sufficient levels of trust exist in the leader-member relationship, and to manage its trends (Burke et al., 2007).

An overwhelming body of research has established that trust indeed significantly contributes to leader effectiveness (Carstens & Barnes, 2006; Galford & Drapeau, 2003; Neves & Caetano, 2009; Wasti, Tan, Brower, & Önder, 2007). Trust is needed in the supervisor-subordinate relationship because leaders and followers depend on each other to perform (Lewicki et al., 2006). Although the leadership concept continues to evolve (Daft, 2011) and no universally accepted definition of leadership exists (Achua & Lussier, 2013; McShane & Von Glinow, 2010), leadership experts from numerous countries seem to reach increasing consensus that leadership is about “influencing, motivating, and enabling others to contribute toward the effectiveness and success of the organizations of which they are members” (McShane & Von Glinow, 2010, p. 360). Leadership thus involves a highly interactive process within which the ability to influence others in a multidirectional and non-coercive way constitutes a core driver of success (Daft, 2011). Dervitsiotis (2006) elaborates on the issue by pointing out that it is the methods rather than the fundamental objectives of leadership that have changed. Essentially, leader objectives are still first and foremost focused on the maintenance of a high level of current performance and secondly on engaging employees in such a way that they will make the most of new opportunities. Achievement is, however, only possible if there are quality of relationships, which proportionately corresponds to the degree of trust among the interacting parties. These parties hold the key to the achievement of strategic competitive advantage (Dervitsiotis, 2006).

The ability to inspire trust is, however, not an easy task to accomplish. In fact, the incapability to enthruse trust is often listed as one of the most important reasons why leaders fail (Burke, 2006; Pienaar, 2009). According to Domina (2011), leadership perception and evaluation is a dynamic social process influenced by factors such as gender socialization, role expectations and the socio-cultural environment. Notably, gender diversity is gaining prominence because record numbers of females that are entering the workforce worldwide (Domina, 2011). This represents the most significant change in the labour force during the last half of the twentieth century (Robbins et al., 2009). This trend is also evident in South Africa, where females now make up 41% of the working South African population (Robbins et al., 2009). As a result of these trends, females have an increasingly powerful impact on company performance (Golesorkhi, 2006).

Previous research indicates that the criteria for evaluating leaders are likely to be susceptible to gender bias (Domina, 2011; Hmurovic, 2012). South African organisations have traditionally been male-dominated workplaces where stereotyping became a vicious cycle of self-enforcement to keep the *status quo* (Swanepoel, Erasmus, Schenck, & Tshilongamulenzhe, 2014). Despite legal, political, social and socio-economic efforts to advance gender equality in the south African workplace, gender discrimination continues to occur (Grobler, Wörnich, Carrel, Elbert, & Hatfield, 2006) and women remain subject to male dominance in the workplace (Swanepoel et al., 2014; Werner et al., 2011). It is therefore reasonable to suspect that gender may also be an influential factor within South African organisations when it comes to the decision to trust or mistrust a leader.

In view of the important link between trust and various organisational processes and outcomes, corporate leaders have a responsibility to cultivate trusting relationships within companies and should regard trust as a part of the business strategy (Van Melle Kamp & Bidoli, 2010; Verschoor, 2011). Changing gender diversity trends in the workplace presents at least one important aspect that deserves consideration. Organisations should have a clear understanding of the impact of gender diversity on perceptions of leadership effectiveness and of the ways in which human resources representing both genders can be optimised in order to obtain a competitive advantage (Domina, 2011). Both the significance of trust for meaningful interpersonal relationships and the difficulty to inspire trust in others underscore the importance of understanding trust-building as a management intervention.

Although relationships between trust and various individual and organisational outcomes have been established, the complex influence mechanisms through which these processes are facilitated are not well understood (Dirks & Ferrin, 2002; Mayer & Gavin, 2005). It is

important that we develop a more in-depth understanding of the effects that leaders have on their followers; more specifically, there is a need to develop more precise theories of the underlying psychological processes that transform leader efforts into follower action (Van Knippenberg, Van Knippenberg, De Cremer, & Hogg, 2004).

This thesis specifically focuses on employee trust in the direct leader and investigates specific pathways through which trust promotes work engagement as opposed to intentions to quit. Galford and Drapeau underline the strategic importance of trust by describing it as “the crucial ingredient of organizational effectiveness” and emphasise that the building, maintenance and restoration of trust must be at the top of every chief executive’s agenda (2003, p. 94). A better understanding of the role and best methods to cultivate trust is therefore an investment in effective leadership development.

1.2 Problem Statement

Many businesses are looking for ways to optimise their performance, especially given the economic pressures that they constantly experience (Heavy, Halliday, Gilbert, & Murphy, 2011). It is widely acknowledged that traditional research, production and financial resources are no longer enough to secure a competitive advantage, and that the key is humans and their ability to learn, grow and contribute creatively (Vokic & Vidovic, 2008). Human resources should therefore also be optimised. According to Eccles, Krzus, and Serafeim (2011), the percentage of a company’s market value that can be ascribed to tangible assets has diminished drastically over the years – from approximately 80% in 1975 to less than 20% in 2009. They conclude that, in addition to the need for reporting financial information, the disclosure of non-financial information also becomes a necessity.

Several researchers recommend that information about the levels of trust within an organisation should be regarded as one non-financial indicator of company performance that should inform business strategy and should be of interest, among others, to investors (Van Melle Kamp & Bidoli, 2010; Verschoor, 2011). Despite mounting evidence that trust can enhance organisational excellence and provide a competitive advantage, business performance is still largely measured in terms of traditional financial indices (Van Melle Kamp & Bidoli, 2010; Verschoor, 2011). The resulting lack of information about trust levels, norms and trends in businesses, points to an important gap that should be addressed.

Addressing the issue of measuring and monitoring trust as a key performance area is, however, not as straightforward as it may seem at a first. To begin with, leaders have to

conceptualise trust in a consistent and theoretically sound manner in order to ensure consistency between the theory of the dimensions intended to be measured and its operationalisation. Once leaders have decided which particular performance aspects they need to assess, properly validated measurement instruments must be readily available to do so. Both these requirements present several challenges that require further elaboration.

Trust is an evasive, multi-faceted and complex concept. This has resulted in a proliferation of different angles to approach the conceptualisation of trust. Diverse scholarly perspectives on trust have implications not only for how trust is defined, but also for what is conceptualised as conditions, building blocks and outcomes of trust. Dissimilar methodological approaches may consequently compromise the comparability of findings (McEvily, Perrone, & Zaheer, 2003).

Different conceptualisations of trust have hindered previous research on trust, particularly due to a lack of clear differentiation among factors that contribute to trust, trust itself, and the outcomes of trust (Mayer, Davis, & Schoorman, 1995). Mayer et al. (1995) and McEvily and Tortoriello (2011) highlight problems specifically with a) the definition of trust itself and the associated lack of clarity in the relationship between risk and trust, b) confusion between trust and its antecedents and outcomes, c) lack of specificity of trust referents as the foci of trust, thereby leading to confusion in the levels of analysis, and d) a failure to consider both the trusting party and the party to be trusted.

Rousseau, Sitkin, Burt, and Camerer (1998) conducted one of the most comprehensive cross-disciplinary reviews of trust research to date. In trying to synthesise interdisciplinary views, Rousseau et al. (1998) concluded that the definition of trust proposed by Mayer et al. (1995) is one of the most widely accepted and influential definitions. Mayer et al. (1995, p. 712) define trust as: “the 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.” Rousseau et al. proposed the following closely-related and cross-disciplinary, acceptable definition: “Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another” (1998, p. 395).

These definitions capture several core elements that appear to be constant, regardless of diverging approaches to define trust (Burke et al., 2007; Gambetta, 2008; Gillespie, 2012; Mayer et al., 1995; Rousseau et al., 1998):

- It involves vulnerability, including the active intention to accept a certain degree of dependency in relation to another party.
- There is risk involved, particularly in relation to uncertainty of the outcome of the decision to trust, since a non-opportunistic, positive outcome cannot necessarily be guaranteed.
- The expectation of a positive outcome exists despite risks involved, mainly due to the perceived likelihood that the other party will act benevolently or, at least, not act in a self-serving manner to the extent that it becomes harmful to the trusting party.

Mayer et al. (1995) and Schoorman, Mayer, and Davis (2007) developed a model of trust that provided a turning point for trust research (Ball, 2009). Their model was one of the first to conceptualise trust as a multi-dimensional concept that is essentially relational/interpersonal and context-specific in nature: Relational trust is, for instance, dependent on contextual factors such as the characteristics of the trustor (the person who trusts) and the trustee (the person to be trusted), rather than as an individual characteristic that remains constant regardless of context (Mayer et al., 1995; Schoorman et al., 2007).

Differentiating trust from its antecedents and outcomes helped to clarify the structure of the concept. Mayer et al. (1995) and Schoorman et al. (2007) emphasise that trait factors such as the trustor's propensity to trust, and the trustworthiness characteristics of the trustee, such as ability, benevolence and integrity, impact on the trust action, but cannot be equated to trust itself. Trustworthiness is a quality that the trustee has, while trusting is something that the trustor does. Therefore, trustworthiness and trust are two separate constructs. These two constructs are, however, very closely related, since interpersonal trust cannot exist without a positive assessment of the trustee's trustworthiness. Not only does the model account for the interpersonal and possibly reciprocal nature of trust, it also helps to explain why some individuals are trusted more than others and considers the influence of perceived risk (Mayer et al., 1995). A final advantage of the model is the fact that previous research has established its validity within a South African-specific organisational context (Engelbrecht & Cloete, 2000).

Various researchers have elaborated on the dimensions of trust, using the said model as their point of departure. Dietz and Den Hartog (2006), for example, highlighted the possible *forms* that trust can take and identified three constituent parts: trust as a belief, trust as a decision, and trust as an action. Elaborating on these forms of trust, McEvily and Tortoriello (2011) view trust as an expectation or belief about another party as perceptual or attitudinal in nature, while willingness to make oneself vulnerable is intentional and results in trust as a risk-taking act, which is behavioural. These three constituent components of trust can

therefore respectively be referred to as trustworthiness beliefs, trusting intentions, and trusting behaviours (Dietz & Den Hartog, 2006; McEvily et al., 2003).

Gillespie (2003, 2012) added another important contribution towards a more comprehensive understanding of trust by pointing out that intentions to trust may or may not result in an actual decision to trust. She therefore proposes a very specific interpretation of the decision to trust by emphasising its volitional nature and defining it in terms of risk-taking behaviours as is evidenced in the trustor's willingness to rely on and disclose relevant, sensitive information to the other party. For clarity's sake, this form of volitional trust, also known as behavioural trust, will henceforth be a central focus and binding link throughout the study.

1.2.1 Measurement of Trust

The availability of valid and reliable measurement tools is essential for measuring trust. Dietz and Den Hartog (2006) emphasise that our knowledge of a construct can only be as good as the measures we use to examine it. A sizeable amount of work in the trust literature has been devoted to developing conceptual coherence around definitions of trust, but much work still has to be done to improve the operationalisation of trust measurement instrument (Gillespie, 2012). The following problem areas are highlighted as important reasons why progress has been slow: a) fragmented and idiosyncratic use of trust instruments rather than adopting pre-existing measures; b) even when duplicated, there is insufficient reporting on statistical techniques and statistical findings, particularly pertaining to validity; c) inconsistency between the conceptualisation and measurement of trust and a tendency to measure trust as a unidimensional construct while it in fact requires a multidimensional approach.

McEvily and Tortoriello (2011) highlight trust measurement instruments developed by Mayer and Davis (1999) and Gillespie (2003), among a few others, as instruments that have been developed with rigour and care, and recommend that the accuracy of replication could be improved by future studies that replicate these instruments and report sufficiently detailed information about construct validity so as to permit comparisons across studies (p. 41). McEvily and Tortoriello (2011) specifically recommend that a differentiation should be made between measures of trustworthiness versus behavioural or volitional trust.

In general, research has neglected to link the conceptual definition of trust as 'willingness to be vulnerable' or 'intention to accept vulnerability' as promoted by Mayer et al. (1995) and Rousseau et al. (1998), to appropriate measures thereof (Gillespie, 2012). Trust-related

research often suffices with measures of trustworthiness beliefs (Dietz & Den Hartog, 2006; Gillespie, 2012), which is surprising since literature has shown that it is rather behavioural estimation items that are strongly predictive of actual behaviour (Armitage & Connor, 2001). Intention to trust is regarded as a stronger predictor of future behaviour (Gillespie, 2003; 2012). Our capacity to ever achieve full knowledge of the motives of others is limited (Gambetta, 2008); therefore, trust requires a 'leap of faith' that extends beyond trustworthiness assessments (Gillespie, 2012; Möllering, 2006). Within an organisational context, trust is best understood as a behaviour (Caldwell & Dixon 2009). This suggests that measures that capture the volitional side of trust seem to be more appropriate (Dietz & Den Hartog, 2006; Gillespie, 2003).

Opposing the idiosyncratic use of tailor-made instruments for each context, McEvily and Tortoriello (2011) conducted a comprehensive search for suitable trust assessment instruments that could be replicated to enable comparable findings across countries in service of building a solid knowledge base of trust-related issues. The Behavioural Trust Inventory (BTI; Gillespie, 2003) is one of only a very few state-of-the-art instruments that measures behavioural or volitional trust and which McEvily and Tortoriello (2011) recommend for consistent use globally.

The BTI has a two-factorial design that measures both reliance and disclosure components of trust (Gillespie, 2003). Although the BTI has excellent psychometric properties (Gillespie, 2003; 2012; McEvily & Tortoriello, 2011), more research is necessary to establish its validity across countries. McEvily and Tortoriello (2011) specifically emphasise that when a trust measure is replicated, findings should not merely report on reliability, but should also report detailed statistics such as on its construct validity.

An instrument that has been devised in one culture can nevertheless not be automatically assumed to be universally applicable (Wasti et al., 2007). Not only are comparisons between different groups only appropriate after ascertaining measurement equivalence (Van de Vijver & Leung, 1997), but it is also a legal requirement in South Africa as is stipulated in South Africa's Employment Equity Act No. 55 of 1998.

There is a gap in our knowledge regarding our understanding of gender differences in relation to trust (Golesorkhi, 2006) and specifically regarding the evidence of measurement in variance of different trust scales across gender (Ding, Ng, & Wang, 2014). This study attempts to establish the factorial validity and construct equivalence of the BTI in terms of male and female employees in a South African workplace context. A similar study has never

been attempted as far as I am aware. If the validity of the BTI could be confirmed within this context, it would to some extent address the need for proper measures to monitor trust as a non-financial indicator of performance. Such a study would also contribute towards theory development that reflects the particular social context of management within a diverse and challenging SA workplace context.

The major components of a trust model, as has been highlighted thus far, each provides a different vantage point that highlights the multi-dimensionality of the concept and will serve to outline the research problem in more detail.

1.2.2 Conditions for Trust

Four main categories of beliefs can be distilled from a large body of research pertaining to conditions that influence the development of trust (Heyns & Heyns, 2010, 2011). These include a) the characteristics of the trustor and the trustee, b) the nature of the relationship between the role-players involved (Dietz & Den Hartog, 2006), c) the context within which an appeal to trust is made (Schoorman et al., 2007) and d) values and norms that govern the relationship within a particular situation (Colquitt et al., 2011).

One of the most important characteristics of the trusting party is propensity, which points to a certain predisposition towards trust, which has little to do with the person asking for trust (Colquitt, Lepine, & Wesson, 2009). Propensity is relatively stable in nature (Rotter, 2008) and seems to be a product of both “nature and nurture” (Colquitt, Lepine, & Wesson, 2010). This suggests that every individual has some baseline level of trust that will influence the person’s willingness to rely on the words and actions of others. Mayer captures propensity as “a trait that leads to a generalized expectation about the trustworthiness of others” (1995, p. 715).

Trust is also understood as a complex compilation of judgements by the trustor on different characteristics of the trustee. Although numerous characteristics can influence one’s judgement of another’s trustworthiness, Mayer et al. (1995), after conducting a thorough review of factors that lead to trust, concluded that mainly three characteristics, namely ability, benevolence and integrity, explain a major portion of trustworthiness and are considered to be the most salient (Mayer et al., 1995). Both Burke et al. (2007) and Colquitt et al., (2009) confirmed through their research that the wider variety of characteristics mentioned in the literature are indeed indicative of the same underlying constructs and

essentially relate to perceptions of the trustee's character (especially integrity), capacity (especially competence and expertise) and goodwill.

Ability is "that group of skills, competencies, and characteristics that enable a party to have influence with some specific domain" (Mayer et al., 1995, p. 717), and can also refer to professionalism, as reflected both in technical and management skills (Colquitt et al., 2010; Mayer & Davis, 1999). Ability in relation to a leadership role would, for example, be demonstrated by setting compelling direction and creating enabling structures to promote effective task execution, dissemination of relevant information to help employees adapt to particular situations that arise, and the setting of functional norms (Burke et al., 2007). *Benevolence* refers to the trustee's intention to do well to others without having an egocentric profit motive (Mayer et al., 1995; Mayer & Davis, 1999). In relation to a leadership role, such goodwill would be exemplified by creating and sustaining supportive contexts, a consultative decision-making style, coaching, and certain transformational and transactional behaviours (Burke et al., 2007). *Integrity* is defined as "the trustor's perception that the trustee adheres to a set of principles that the trustor finds acceptable" (Mayer et al., 1995, p. 719). Integrity can be judged by examining previous behaviours, reputation, the similarity between the behaviour of a trustee (e.g. a leader) and the trustor's (e.g. a subordinate's) internal beliefs, and the consistency between words and actions (1995). Accountability, perceptions of justice and value congruence are closely associated with leadership integrity (Burke et al., 2007).

When considering the influence of the characteristics of both the trustor and trustee as conditions for trust, one has to ask oneself how the *interplay* between these two factors precisely comes to influence the trustor's decision to accept vulnerability towards another person. Do all the most widely acknowledged facets of trustworthiness – ability, benevolence, and integrity – have significant, unique relationships with trust behaviour? If so, which perceived characteristic could be regarded as the strongest predictor of one's willingness to engage in trusting behaviour? To what extent does propensity and trustworthiness beliefs complement each other in the decision-making process? Does trust propensity still contribute to the decision to trust once trustworthiness is controlled?

If the nature and strength of relationships between conditions for trust and actual (volitional) trust could be determined, this knowledge could assist management in identifying risk patterns and devising more focused strategies to improve intra-organisational dyadic relationships within companies.

Previous research failed to provide a clear answer. Colquitt, Scott, and LePine (2007) conducted meta-analyses of 132 independent samples to explore the proportionate contribution of trustworthiness and propensity on volitional trust and several organisational outcomes. Although meta-analytical structural equation modelling supported a partial mediation model wherein trustworthiness and propensity explained incremental variance in behavioural outcomes when trust was controlled for, their research had several shortcomings that prevented the researchers from fully achieving their objectives. One important aspect that they highlighted for proper consideration in future studies is the inherently context-dependent nature of trust, as this also influences the decision-making process. For the purposes of this study, it sensitises us to the fact that trust assessments may be prejudiced by relatively unique contextual factors on a macro-level (for example due to a troubled socio-political history in a specific country) and on a micro-level (such as the personal history of interaction patterns between specific individuals). These factors therefore need to be explored in more depth to fully appreciate their possible implications for trust assessments and comparisons of findings between different groups of people.

Apart from the characteristics of the role-players (propensity and trustworthiness) as predictors of trust, the second and third conditions for trust relate to the nature of the relationship between specific interacting parties and the context or situational factors that may impact on the trust decision.

On a macro-level, factors beyond the actual relationship are potentially decisive in the trust formation process (Dietz & Den Hartog, 2006; Ferrin et al., 2006). In addition, a whole range of demographic variables have been shown to influence the trustee's conceptualisation of trust (Lau et al., 2003; Von der Ohe & Martins, 2010; Wasti et al., 2007) and to also influence the criteria employed to evaluate perceived trustworthiness of another party (Dietz & Den Hartog, 2006). However, the macro-societal context and characteristics of the role-players involved do not entirely explain why some leaders are trusted more than others. Even within the same context, the scope of trust may vary, depending on the specific relationship's history, stage of development, and cues in the immediate setting (Rousseau et al., 1998). The unique relational history between the role-players is therefore another central element influencing the creation of trust (Neves & Caetano, 2009), and the quality of this unique relationship inspires the degree of trust that develops between them (Burke et al., 2007; Dietz & Den Hartog, 2006).

It is therefore important to realise that, seen from the employee-as-trustor perspective, specific leader behaviours are quite influential in creating a history of experiences that serve

to either build or erode trust in that leader. Kramer (2006, p.10) echoes this sentiment by reminding us that “although trust may be desirable in the abstract, it really makes sense only when those trustees on whom people depend are deserving of that trust.”

Leaders can be regarded as architects of a work context in that they can significantly influence both how employees view their work (attitudes) and how they perform. Dervitsiotis (2006) explains how this comes about: As the relationship develops through repeated cycles of risk-taking and positive outcomes, the basis for trust tends to transform to one grounded in emotional affinity (affect-based trust). The benevolent sharing of information, cooperation and successful coordination of interdependent tasks create vibrant interaction networks that gradually shape trust through common goals, shared values and similar worldviews on issues of mutual concern that ultimately result in identification-based trust. High quality trust relationships show resilience, flexibility and “landscape fitness” (Dervitsiotis, 2006, p. 809) that promote productive performance and ultimately provide the company with a competitive edge (Dervitsiotis, 2006).

Kahn (1990) specifically points to the consideration of human needs as an influential factor by stating that employees who trust their leaders will experience psychological safety and will for this reason be more willing to invest themselves in their work. These findings clearly indicate that employee emotions and the satisfaction of specific psychological needs influence the trust-performance process in some way.

1.2.3 Self-determination Theory

The self-determination theory (SDT) (Deci & Ryan, 2000) offers another useful approach to exploring the relationship between trust, emotions and work outcomes from the perspective that trust satisfies important work-related human needs that, through the stimulation of internal motivation, ultimately results in desirable performance. Central to this theory is the idea that individuals strive to be self-regulated, in other words to function autonomously. Autonomous motivation can be encouraged by creating work environments that satisfy three basic psychological needs – the need for autonomy, relatedness and competence (Deci & Ryan, 2000). These three needs are universally inherent to all human beings and it is important to understand how they relate to behaviour (Deci & Ryan, 2000; Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008).

The need for autonomy conveys the desire to feel like the initiator of one’s own actions (Baard, Deci, & Ryan, 2004). This entails experiencing freedom to act from interest and

integrated values (Deci & Ryan, 2000; 2004; Deci et al., 2001) and choice when carrying out an activity (Deci & Ryan, 2011). The need for relatedness concerns a need to feel connected to significant others and to develop close and intimate relationships with them, branded by mutual reliance, respect and caring (Deci & Ryan, 2000; Deci et al., 2001). Two main features of the need for relatedness can be distinguished: It implies that there is frequent, affective interaction between the parties, accompanied by a belief that the other party cares about one's welfare (Baumeister & Leary, 1995; Marescaux, De Winne, & Luc Sels, 2010). Finally, the need for competence concerns feeling skilful (Marescaux et al., 2010), effective in mastering optimally challenging tasks and being successful at attaining desired outcomes.

Psychological needs influence attitudes and motivates performance, but do not have identical functions and consequences (Deci & Ryan, 2000). Of the three needs, autonomy is considered to be the "critical developmental trajectory" (Ryan, Kuhl, & Deci, 1997, p. 702) which is essential for growth and health because it provides the holistic knowledge that individuals require to identify what they need in particular situations and to set appropriate goals to have these needs met. Autonomy satisfaction furthermore plays a vital role in the motivational process in that it facilitates identification and introjection of external pressures in such a way that the behaviour becomes increasingly self-regulated (Gagné & Deci, 2005; Ryan et al., 1997). Contexts that provide opportunities to satisfy all three of these needs will promote optimal functioning (Deci & Ryan, 2000) because the satisfaction of these needs stimulates intrinsic motivation (Gagne, 2003).

SDT regards manager behaviours that promote supportive and trusting relations as important because they satisfy psychological needs such as the need for autonomy and relatedness within the work context (Rothmann, Diedericks, & Swart, 2013). Individuals are inclined to adopt the values and model the behaviours of those whom they trust (Ryan, Patrick, Deci & Williams, 2008). Deci et al. (2001) add that a sense of being respected, understood, and cared for is essential to forming the experiences of connection and trust because they encourage internalisation.

Schoorman et al. (2007) point to a gap in the current literature regarding the interactive role between cognitive and emotional assessments of risk in the trust formation process. While their model (Mayer et al., 1995) mainly accounts for cognitive processes in the assessment of risk, emotional experiences certainly also affect levels of trust (Mc Allister, 1995) and may cause the trustor to update his/her perceptions of trustworthiness (Schoorman et al., 2007). Schoorman et al. (2007) believe that an exploration of the role of emotions presents an interesting area of research that would add a new dimension to their model.

1.2.4 Outcomes of Trust

Engagement and turnover intention (also referred to as intention to quit) represent two key challenges that confront business leaders worldwide today (Bersin, Agarwal, Peltser, & Schwartz, 2015) and are therefore of interest to this study. The loss of skilled workers due to global competition presents a primary challenge for South African managers as well (Rothmann et al., 2013), not only because of the considerable tangible and intangible cost associated with lost productivity, but also because it is difficult to find suitable replacements (Bothma & Roodt, 2013). In addition to retaining talented workers, organisations today require that employees should not only be physically productive, but also demonstrate higher levels of psychological involvement and psychological agility far beyond what had ever been the case before (Schaufeli, 2014). These requirements highlight the need for an engaged workforce. It is furthermore abundantly clear from previous research findings that engagement is important due to its established links to a range of attitudinal and behavioural outcomes, as well as performance and financial outcomes (Albrecht, Bakker, Gruman, Macey, & Saks, 2015; Christian, Garza, & Slaughter, 2011).

Kahn (1990), a pioneer in the study of engagement, developed a personal-based model of engagement according to which engagement is an extension of one's preferred self to employment roles as evidenced by the fulfilling expression of the employee's physical, cognitive and emotional abilities in a work role. Consistent with Kahn's conceptualisation of engagement as a psychological state, Schaufeli, Salanova, Gonzalez-Roma, and Bakker (2002, p. 74) define work engagement as "... a positive, fulfilling, work-related state of mind characterized by vigour, dedication, and absorption".

After a comprehensive review of the engagement literature, Christian et al. (2011) concluded that the following characteristics are central to a theoretically sound conceptualisation of work engagement: Foremost, the psychological connection with the performance of work tasks – as opposed to an attitude toward features of the job – should be acknowledged. In addition, there is a holistic experience of a connection with the work role involving multiple dimensions of the employee (physical, emotional and cognitive) simultaneously. Thirdly, engagement could be regarded as a state of mind that is fairly enduring but may fluctuate over time. As a result, they attempted to formulate a theoretically consistent and sound definition of engagement as "a relatively enduring state of mind referring to the simultaneous investment of personal energies in the experience or performance of work" (Christian et al., 2011, p. 95).

Although trust and engagement have been studied independently, minimal research has been done to explore the relationship between trust in a leader and its influence on work engagement (Chughtai & Buckley, 2008, 2013; Hassan & Ahmed, 2011). Among the few studies that could be identified, some of the following findings are evident: Christian et al. (2011) found tentative evidence that leadership was related to engagement, but recommend that an exploration of the role of trust as a possible moderator variable would be beneficial to understand this relationship more fully.

Both Schaufeli and Bakker (2004) as well as Chughtai and Buckley (2008) argue that employees' confidence in the supervisor could promote work engagement, mostly being encouraged by the belief that the supervisor is sufficiently able and competent to provide the necessary job resources when needed. Chughtai and Buckley (2008) also stress that there is a growing need to examine the impact of other personality, psychological and situational variables on engagement in order to gain a better understanding of this construct. They particularly highlight the need to provide additional empirical evidence of the relationship between high trust in an immediate supervisor and its impact on employees' work engagement.

One of the most advantageous outcomes of trust is reduced turnover intent (Burke et al., 2007; Connell, Ferres, & Travaglione, 2003; Lam, Loi, & Leong, 2011). Turnover intention describes an attitudinal orientation or a cognitive manifestation of the behavioural decision to quit, which can be defined as a conscious and deliberate readiness to leave the organisation (Marezcaux et al., 2010; Tett & Meyer, 1993). Turnover intention can be regarded as the most reliable indicator of subsequent turnover behaviour (Costigan, Insinga, Berman, Kranas, & Kureshov, 2012).

Previous research (Costigan et al., 2012; Dirks & Ferrin, 2002) has established that employees whose trust in their leaders is based on an emotional bond (affect-based trust) tend to reciprocate the leader's perceived care, concern and support with positive workplace behaviour and attitudes. The opposite is also true: Employees who do not trust their managers perceive themselves to be at risk of capricious decision making and are more inclined to feel vulnerable, prompting them to quit.

The specific mechanisms through which trust inspires individuals to perform are, however, not well understood (Dirks & Ferrin, 2002; Mayer & Gavin, 2005). More research is needed to fully explore the relationship between trust in a leader, work engagement and turnover intentions, particularly regarding the mediating role of psychological need satisfaction in

these relations. Although it is clear that trust shapes positive work attitudes through the interaction of cognitions and emotional triggers (Schoorman et al., 2007), few studies have examined how the particular interaction between trust and satisfaction of human needs serves to promote positive work attitudes and performance. Van den Broeck, Vansteenkiste, De Witte, Soenens, and Lens (2010) recommend that future studies on human need satisfaction could also benefit from exploring whether the needs for autonomy, competence, and relatedness yield different relations with particular outcomes.

The following question requires further investigation: What are the relationships between psychological need satisfaction, behavioural trust (as best trust-specific predictor of performance) and employee attitudes towards work as embodied by engagement and turnover intentions? Although some studies have explored the relationship between some or other form of trust, psychological need satisfaction and selected organisational outcomes (May, Gilson & Harter, 2004; Rothmann et al., 2013), no study has explored the relationship between psychological need satisfaction, volitional trust, work engagement, and turnover intentions. No previous studies could be found that focused specifically on volitional trust, as evidenced by reliance and disclosure, in this respect.

A better understanding of the relationships between sub-dimensions of psychological need satisfaction, volitional trust and the selected outcomes firstly serves to develop a comprehensive and contextually suitable model of trust and, secondly, it may reveal new pathways to enhance individual performance and desirable organisational outcomes. Understanding the exact nature of these interrelationships could assist leaders further in creating a work environment that could encourage valued employees not only to stay, but to be fully engaged in their work-roles.

In summary, it is clear that trust has an impact on business performance on a strategic, operational, interpersonal and individual level of performance. Modern organisations are more reliant on trust than ever before, since changes in major workplace trends have diluted the power of traditional surveillance and control measures. Both retention and engagement of valued employees are critical to organisational competitiveness. High trust relationships specifically promote engagement, while low trust relationships are associated with intentions to leave. It can therefore be concluded that an adequate understanding of trust-building processes is of strategic importance to organisations, firstly because it helps to sustain organisational competitiveness in an increasingly global economy, and secondly, because it enhances leader effectiveness.

The management of trust relationships is therefore vital for any leader who wants to have a positive impact on business performance. Consequently, there is a need for non-financial organisational performance indicators such as the establishment of trust norms and trends. This information can help managers to monitor their own effectiveness in building trust relationships with their subordinates. In addition, it will help to promote employee psychological need satisfaction and engagement and to manage turnover intentions proactively.

Trust tests are not readily available to provide the necessary information, partly due to the relative scarcity of suitable measurement instruments, and also because even for the few measures that could have been used, construct equivalence has not been ascertained for a South African workplace context. These voids give rise to the following main research question: What is the relationship between certain conditions for trust, volitional trust and selected outcomes as manifested within a South African workplace context? More specifically:

- What are the relationships between selected predictors of trust (propensity and trustworthiness) and willingness to actively engage in trusting behaviour? In other words, to what extent do propensity and trustworthiness beliefs complement each other in the decision-making process?
- Can the BTI as measure of volitional trust be considered a reliable and valid measurement instrument with demonstrated construct equivalence across male and female gender groups?
- What is the relationship between psychological need satisfaction, volitional trust (reliance and disclosure), engagement and turnover intention?

Dietz and Den Hartog (2006) emphasise that more work has to be done to improve both our understanding of trust, and the quality of existing tools to measure the construct. This thesis aims to contribute towards a better understanding of interpersonal trust relationships between employees and their direct leaders within a multi-cultural, intra-organisational South African workplace setting. Findings will serve to develop a comprehensive model of trust that will advance our understanding of the meaning, causes and consequences of trust.

Relatively few studies have examined trust within a South African workplace context. Although the literature has established that the measurement of volitional trust is an excellent predictor of organisational outcomes and that the BTI is one of a very few noteworthy instruments to measure volitional trust, no study has ever attempted to validate

the BTI for a South African workplace context. If the validity of the BTI could be confirmed, it would to some extent address the need for proper measures to monitor trust as a non-financial indicator of performance.

It would furthermore promote a common approach to trust measurement, because a more consistent application of state-of-the-art instruments enables comparisons of findings, thereby adding to our body of knowledge across a wider international spectrum. No previous study has examined the relationship between the antecedents of trust, volitional trust and selected outcomes intended by this study. Such knowledge would contribute towards theory development that reflects the particular social context of management within a diverse and challenging SA workplace context.

In an increasingly diverse workplace environment, objectively established information regarding the levels of trust among main demographic groups such as males and females could provide indicators of specific issues that cause distrust and create misunderstanding. Identifying the mechanisms through which trust in leadership can be developed as well as those factors that moderate this relationship could improve management's ability to pre-empt conflict, improve cooperation and personal contributions that ultimately affect corporate results. Objectively established information about the levels of trust can enhance strategy as it can be monitored as part of the organisation's risk management strategy. Understanding how trust develops can provide useful guidance to organisational leaders on how to build high-trust workplaces and instil confidence among investors.

In short, a better understanding of the relationships between sub-dimensions of psychological need satisfaction, volitional trust, and engagement and turnover intentions will help to develop a comprehensive model of trust that may reveal new pathways to enhance individual performance that will ultimately improve organisational outcomes on a strategic level. Such knowledge is of interest both to researchers and practitioners.

1.3 Research Objectives

1.3.1 Primary Objective

The primary objective of this study was to develop and test a model of dyadic trust relationships within a South African workplace context by examining the relationship between selected antecedents, mediators and outcomes.

1.3.2 Secondary Objectives

The specific objectives of this study were to:

- validate an identified state-of-the-art trust measurement instrument, the BTI, for a South African workplace setting;
- explore possible similarities and differences in levels of trust between male and female employees;
- determine the relative strength of relationships between selected predictors of trust (trust propensity and trustworthiness) and sub-dimensions of behavioural trust (reliance and disclosure);
- investigate the effect of dyadic trust relationships on the satisfaction of psychological needs and selected organisational outcomes (work engagement and turnover intentions in particular); and
- make recommendations to management regarding the management of interpersonal trust relationships between male and female employees and their direct leaders within an intra-organisational South African workplace setting.

1.4 Research Method

1.4.1 Research Design

This study followed a quantitative research approach in order to describe, quantify and determine the strength of relationships between constructs. A cross-sectional survey design was used, which allows the researcher to study groups of subjects at various stages of development simultaneously at a particular point in time (Gravetter & Forzano, 2006; Trochim & Donnelly, 2008). Within the cross-sectional design, a multigroup latent model design was used to confirm the psychometric properties of the measurement instruments and to examine variances between selected demographic sub-sample groups. Latent variable modelling was next to investigate the fit of hypothesised models, indicating the strength of relationships between antecedents, moderators and outcomes of trust.

1.4.2 Participants

Two large convenience samples were used in this research: Sample one drew information from an existing database at a business school from a local university. This database was compiled by postgraduate MBA students over a stipulated period of three months in 2013, in

partial fulfilment of the requirements for their studies in the subject Organisational Behaviour and Leadership. The database contained structured questionnaires that had been completed voluntarily and anonymously by full-time, literate employees of private sector companies in the petrochemical and raw materials industries situated in the Vaal Triangle region of South Africa. None of these employees were associated with the University in any way. A convenience sample of 600 coded responses relevant to this thesis was drawn from the existing database to achieve the aims of the first two articles of this study. All respondents have a minimum qualification level of matric or higher and are employed in positions ranging from low-, middle- to senior levels of employment.

The second convenience sample targeted participants of an agricultural business (252 respondents). Permission for participation was granted on condition that the identifying particulars of the company (due to the competitive environment) and the participants (due to ethical considerations) were not to be made public.

1.4.3 Measuring Instruments

Five measuring instruments were used to assess the relevant aspects of the leader-follower relationship and selected organisational outcomes.

The *Behavioural Trust Inventory* (BTI) (Gillespie, 2003) was used to measure trust between employees and their leaders. The BTI is a standardised instrument with a stable two-factor structure that significantly contributes to forecasting key leadership outcomes to a better extent than alternative measures of trustworthiness (Gillespie, 2012). The BTI is a 10-item measurement instrument consisting of two dimensions of behavioural trust, namely reliance-based trust (items 1-5) and disclosure-based trust (items 6-10). Within a workplace context, the first five items measure the follower's willingness to rely on the direct leader's work-related skills, abilities and knowledge, whereas the remaining five items assess the follower's willingness to disclose sensitive information of either work-related or personal nature to the direct leader. Participants rate their willingness to demonstrate trusting behaviours towards the leader on a 7-point rating scale ranging from 1 (*not at all*) to 7 (*completely*). A high score on the reliance-based scale indicates confidence in the leader's skills and competence, while a high score on the disclosure-based scale indicates that the follower regards the leader as trustworthy.

Four scales of the *Organisational Trust Instrument* (OTI) (Mayer & Davis, 1999) was used to measure propensity (8 items) of the trusting party and perceived trustworthiness

characteristics (17 items) of the person to be trusted, as main predictors of trust. Each item requires respondents to answer on a scale ranging from 1 (*disagree strongly*) to 5 (*agree strongly*). During its initial standardisation, all subscales obtained acceptable reliability coefficients (Mayer & Davis, 1999).

The *Work-related Basic Need Satisfaction Scale* (WBNSS) (Van den Broeck et al., 2010) was used to assess the satisfaction of psychological needs. The scale consists of 18 items that aim to tap into the respondent's personal experiences at work and distinguish between three basic psychological needs: the need for autonomy, competence and relatedness satisfaction. Each item offers options ranging from 1 (*totally disagree*) to 5 (*totally agree*). Examples of items are: "I feel free to do my job the way I think it could best be done" (autonomy); "I am good at the things I do in my job" (competence) and "At work, I feel part of a group" (relatedness). Studies within South African workplace contexts have confirmed that the scale has a stable three-factor structure and acceptable alpha coefficients of 0.81, 0.79 and 0.79 for the three respective scales (Rothmann et al., 2013).

An adapted version of the *Work Engagement Scale* (WES) (May et al., 2004) was used to measure work engagement. This scale is based on Kahn's conceptualisation of engagement (Kahn, 1990 to) and employs 12 items to measure cognitive (e.g. 'Performing my job is so absorbing that I forget about everything else'), emotional (e.g. 'I really put my heart into my job') and physical (e.g. 'I exert a lot of energy performing my job') elements of engagement. All items are scored on a 7-point frequency scale where options range from 1 (*almost never or never*) to 5 (*always or almost always*). In a South African context, Rothmann (2010) has found each component to have the following alpha coefficients: physical = 0.80; emotional = 0.82; and cognitive = 0.78.

Employees' intention to leave was measured by the *Turnover Intention Scale* (TIS) (Sjöberg & Sverke, 2000). This three-item scale measures the strength of the respondent's intention to resign from his/her present position on a 5-point scale, ranging from 1 (*totally disagree*) to 5 (*totally agree*); a high score reflects a strong intention to leave. During initial standardisation of this scale, an acceptable Cronbach alpha coefficient of 0.83 was obtained (Sjöberg & Sverke, 2000).

1.4.4 Procedure

The first sample was drawn from an existing business school database that is available to the researcher.

For the second sample, permission to conduct the study was obtained from the management of the participating organisation. The roles and responsibilities of the different parties involved were explained to all relevant parties. The human resource manager of the company and his assistant were asked to assist with the distribution and collection of data. This study involved employees with a qualification of matric or higher. Each participant received a previously addressed envelope containing a cover letter explaining the purpose and objectives of the questionnaire. The questionnaire included an introductory section emphasising to each participant in writing that participation is completely voluntary and anonymous. After completion of the questionnaires, respondents were asked to either return the sealed envelopes to the designated representatives or mail them directly to the researcher.

1.4.5 Statistical Analyses

Data analysis was conducted by means of computerised packages, namely SPSS Version 22 (IBM Corporation, 2013) and Mplus (Muthén & Muthén, 1998-2014).

Structural equation modelling (SEM) was performed in Mplus (Muthén & Muthén, 1998-2014), firstly to confirm the reliability and validity of constructs, and secondly to test hypotheses regarding the relationship between structured models as hypothesised in this study. Various models were tested by using the maximum likelihood method (Wan & Wang, 2012). The maximum likelihood mean and variance adjusted estimator (MLMV) was used to test continuous variables in a dataset where possible multivariate kurtosis was suspected, and the weighted least-squares with mean and variance adjustment (WLSMV) estimator was used where items were defined as categorical (Brown, 2006; Wang & Wang, 2012).

CFA was done to test the fit of the hypothesised models to the data. Given the findings of a poor-fitting initially hypothesised model, model development followed. Possible misspecifications as suggested by so-called modification indices (MI), were looked for in order to fit a revised, re-specified model to the data.

The Chi-square statistic, which is the test of absolute fit of the model, together with approximate fit indices such as the root mean square error of approximation (RMSEA; < 0.08), the comparative fit index (CFI; ≥ 0.95) (Kline, 2011), and the Standardised Root Mean Square Residual (SRMR; ≤ 0.08) (Kline, 2011) were used to compare models and determine the best fit (Kline, 2011).

When testing for measurement invariance, an insignificant change in the chi-square statistic ($\Delta\chi^2$) was considered evidence for invariance between the more restrictive and the comparison model, given that the CFI, TLI, RMSEA and SRMR displayed an acceptable overall model fit. In addition, two supplementary goodness-of-fit statistics were used to assess model fit of non-nested models, namely the Akaike Information Criterion (AIC) as a comparative measure of fit and Bayes Information Criterion (BIC) as an index of model parsimony (Kline, 2011). Four different levels of measurement invariance were examined in a series of hierarchical steps, namely configural (pattern) - weak (metric) -, strong (scalar) - and strict measurement invariance (Wang & Wang, 2012): Configural invariance indicates whether the same number of factors with the same pattern of fixed and free factor loadings could be specified in each group.

Metric (weak) invariance tests if factor loadings are invariant for the different groups and thereby provides an indication whether respondents from the different groups that were tested, responded to the items in the same manner. Scalar invariance tests assess whether individuals who have the same score on the latent construct would obtain the same score on the observed variables regardless of their group membership. After completion of the series of measurement invariance tests, latent factor mean analyses was finally conducted to determine if there were any significant differences between respondents from the different sub-sample groups that were tested.

Reliabilities (ρ) of scales measured by items rated on a continuous scale were computed using a formula based on the sum of squares of standardised loadings and the sum of standardised variance of error terms (Raykov, 2009; Wang & Wang, 2012). Indirect effects and moderation effects were computed. The procedure described by Hayes (2009, 2013) was used to assess potential mediating effects. Bootstrapping was used to construct two-sided bias-corrected 95% confidence intervals (CIs) to evaluate indirect effects.

1.4.6 Ethical Considerations

Ethical clearance of the study was given by the Ethics Committee of the North-West University (Ethics number: NWU-00014-14-A8). This study was conducted on employees with a qualification of matric or higher. Fieldworkers were briefed about the purpose and objectives of the study and were asked to distribute questionnaires to colleagues at their respective workplaces. It was explained to all participants that participation is completely voluntary and anonymous. The purpose and objectives of the study were stipulated in a cover letter attached to the questionnaire, which fieldworkers distributed to all participants.

The questionnaire included an introductory section emphasising to each participant in writing that participation is completely voluntary and anonymous. At no stage were participants asked to provide any information of any kind that could identify them personally. Instead, participants were asked to construct a code only known to them, which enabled the researcher to connect sub-sections of the same questionnaire to each other after data capturing, while simultaneously protecting the identity of the specific respondent. The name and contact details of the researcher was indicated on the cover letter to enable participants to clarify queries, should they have any.

1.5 Chapter Layout

The chapters in this thesis are presented as follows:

- Chapter 1: Introduction, problem statement and objectives.
- Chapter 2: Validation of the Behavioural Trust Inventory for a South African workplace context.
- Chapter 3: Dimensionality of trust: An analysis of the relationship between propensity, trustworthiness and volitional trust.
- Chapter 4: The relationship between volitional trust, psychological need satisfaction, engagement and turnover intention.
- Chapter 5: Conclusions, limitations and recommendations.

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CHAPTER 2: RESEARCH ARTICLE 1

Comparing Trust Levels of Male and Female Managers: Measurement Invariance of the Behavioural Trust Inventory

Manuscript 1, entitled “Comparing Trust Levels of Male and Female Managers: Measurement Invariance of the Behavioural Trust Inventory”, will answer the following secondary research question: “Can the BTI as measure of volitional trust be considered a reliable and valid measurement instrument with demonstrated measurement invariance across male and female gender groups?”

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Comparing Trust Levels of Male and Female Managers: Measurement Invariance of the Behavioural Trust Inventory

Abstract

Despite the widely acknowledged need for validated trust measurement instruments and the legal obligation to ensure that psychometric tests are unbiased towards different groups in South Africa, no attempt has ever been made to address the aim of this study, which is to investigate the measurement invariance of the Behavioral Trust Inventory for managers of different genders. A cross-sectional survey with a convenience sample ($N = 539$) was used. The Behavioral Trust Inventory and a biographical questionnaire were administered. The results showed that a two-factor model (consisting of reliance and disclosure) fitted the data best. Measurement invariance by gender was computed with the establishment of subsequent invariance constraints in the model parameters across groups. Configural, metric and partial scalar invariances of the two-factor model of the Behavioral Trust Inventory were confirmed across male and female managers. One item that measures one's willingness to share personal beliefs with a leader demonstrated a lack of scalar invariance for the female group; results for this item should therefore be treated with caution. Finally, latent factor mean analyses revealed no significant differences between male and female managers on the trust scales.

Keywords: Managers, behavioural trust, validation, measurement invariance, metric invariance, scalar invariance

Our knowledge of a construct can only be as good as the measures we use to examine it (Dietz & Den Hartog, 2006). While a sizeable amount of work in the trust literature has been devoted to developing conceptual coherence around definitions of trust, there is still a dire need for the further development of noteworthy trust measurement instruments that can be assumed to be universally applicable (Gillespie, 2012; Lewicki, Tomlinson, & Gillespie, 2006; McEvily & Tortoriello, 2011). There is also a gap in our knowledge regarding our understanding of gender differences in relation to trust (Golesorkhi, 2006) and specifically regarding evidence of measurement invariance of different trust scales across gender (Ding, Ng, & Wang, 2014).

Trust is a socially constructed and context-dependent phenomenon and its understanding and interpretation could vary across groups (Wasti, Tan, Brower, & Önder, 2007). Measurement invariance must thus be determined to assess whether participants derive the same meaning from the assessed psychological constructs before comparisons can be drawn between the mean scores obtained from different groups (Ding et al., 2014; Van de Vijver & Leung, 1997). South Africa's *Employment Equity Act No. 55 of 1998* (see Chapter II par. 8) specifies that only psychological tests that are valid, reliable and unbiased against any individual or group may be used for assessment purposes. Over and above this legal requirement, measurement invariance is a prerequisite to the assessment of substantive hypotheses concerning potential group differences, whether the comparisons involve simple between-group mean difference tests or testing whether a theoretical model is invariant across groups (Ding et al., 2014). Even when rigorous testing may support the construct validity of trust, it is still necessary to reassess a construct when comparisons are drawn within the same study (Tabachnick & Fidell, 2007). Violation of the assumption of measurement invariance is, in short, just as detrimental to substantive interpretation of theoretical models for between-group comparisons as the inability to demonstrate reliability and validity (Ding et al., 2014).

Aim, Hypotheses and Value Added

This study aimed to address the need for validated trust measurement instruments by testing the measurement invariance of the Behavioral Trust Inventory (BTI; Gillespie, 2003) with respect to gender in a South African workplace context. The focus on gender in relation to trust was chosen because previous research highlighted the need for organisations to have a clear understanding of the impact of gender diversity on perceptions of trust (Domina, 2011). This is necessary because gender diversity is gaining prominence worldwide due to record numbers of females entering the workforce (Domina 2011; Robbins, Judge,

Odendaal, & Roodt, 2009); consequently females have an increasingly powerful impact on company performance (Golesorkhi, 2006).

Demographic variables (such as gender) may impact one's conceptualisation of trust and influence the criteria employed in trust decisions (Ding et al., 2014; Wasti et al., 2007). Previously, several laboratory experiments and field studies identified systematic gender differences in the bases for trust decisions, the levels of trust displayed and trust-related risk-taking behaviour, which becomes even more accentuated when the parties involved have unequal power bases (Chaudhuri & Gangadharan, 2003; Gunpath, 2006; Riedl, Hubert, & Kenning, 2010). However, some studies reported either inconclusive or even contradictory results as far as gender-based trust differences are concerned (Chaudhuri, Paichayontvijit, & Shen, 2013; Gunpath, 2006; Judeh, 2011). It is thus clear that research is necessary to understand the differences and similarities between trusting behaviours of males and females.

The BTI was initially developed in Australia (Gillespie, 2003). In response to McEviley and Tortoriello's (2011) call to promote a common approach to trust measurement on a larger scale, this study adds to a cumulative body of knowledge that will advance our understanding of the conceptualization and generalizability of trust across groups. Demonstration of measurement invariance enables comparisons of findings that would be of interest to both researchers and practitioners. Even failure to demonstrate invariance would help to deepen our understanding of the trust concept and its manifestations across a wider international spectrum.

If measurement invariance for the BTI could be established, it would indicate that males and females respond to items in the same way. The BTI could then be used to measure trust levels within South African organizations and results could be employed for strategic planning purposes. Objectively established information regarding the levels of trust among males and females could furthermore provide indicators of specific issues that cause distrust and create misunderstanding and can be monitored as part of the organization's risk management strategy.

Failure to establish measurement invariance could make an equally important contribution, because it could assist us in developing a better understanding of potential reasons why males and females may respond differently to specific items of the trust questionnaire. Such knowledge could sensitize leaders to gender-specific issues in their efforts to build trust, improve cooperation in gender diverse teams and optimize efforts to unlock potential of both

genders equally. Although the demonstration of full measurement invariance is ideal, it is seldom achieved, resulting in only partial invariance often being established in reality (Wang & Wang, 2012). The following hypotheses are therefore proposed in a series of increasingly stringent criteria of invariance testing:

Trust, as measured by the BTI, consists of a two-factor structure, namely Reliance and Disclosure, which demonstrates configural invariance across genders (hypothesis 1). After demonstration of configural invariance as a prerequisite for subsequent tests, the following specific hypotheses are tested: The two scales of the BTI show metric invariance; thus demonstrating that factor loadings are invariant across groups (hypothesis 2a) and scalar invariance (hypothesis 2b) across gender groups. Males and females do not differ significantly regarding their levels of reliance-based trust (hypothesis 3a) and disclosure-based trust (hypothesis 3b).

Trust

Business leaders are showing growing concern about methods for measuring and strengthening trust levels among members of an increasingly diverse workforce and between leaders and their subordinates (Golesorkhi, 2006; Judeh, 2011). Trust is an essential prerequisite for effective functioning of individuals as well as organisations because it is an important form of social capital that shapes organisational excellence through effective relationships and attitudes that improve individual job performance, organisational processes and corporate performance (Burke, Sims, Lazzara, & Salas, 2007; Colquitt, Lepine, & Wesson, 2011; Covey, 2006; Dirks & Ferrin, 2002; Golesorkhi, 2006; Judeh, 2011; Kramer, 2006; Lewicki et al., 2006). Benefits of trust are also confirmed by research within a South African business context (Carstens & Barnes, 2006).

Mayer, Davis, and Schoorman (1995, p. 712) define trust as “the 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.” The core component of trust is a decision to trust, evidenced by the willingness to accept vulnerability towards another in the presence of risk (Gillespie, 2003; Schoorman, Mayer, & Davis, 2007). This intention/decision to render oneself vulnerable to another party is often referred to as ‘volitional’ trust (McEvily & Tortoriello, 2011).

Although vulnerability can take many forms, these can be clustered into two broad categories, namely reliance-based and disclosure-based (Gillespie, 2012). The reliance-

based component of trust manifests in a follower's willingness to accept information from a leader, such as to buy into the leader's vision, or to accept stated performance goals and decisions made by the leader. Disclosure-based trust is evidenced by the willingness to communicate openly, honestly and effectively. Such a follower would, for example, be willing to share important information with a leader, even if this could be potentially incriminating or damaging to the follower.

Dietz and Den Hartog (2006) note that a trusting party's (trustor's) willingness to disclose to and rely on a trustee (i.e. the person to be trusted) implies a willingness to undertake risks within the relationship with the trustee. While perceived trustworthiness may or may not result in an actual decision to trust, volitional trust implies a leap of faith, i.e. an actual decision to accept the risk of disappointment and even potential harm by the actions of the trustee, should optimistic expectations regarding the outcome of trusting behaviour not be fulfilled. It is therefore important to realise that an assessment of the trust-relevant qualities of a trustee merely informs the decision to trust, but that these elements are conceptually distinct, which should not be equated to trust itself. Because vulnerability – rather than perceived trustworthiness – is central to trust, a suitable measurement instrument necessitates questions that assess the extent to which a trustor is willing to voluntarily take risks in relation to the trustee (Schoorman et al., 2007).

Studies showed that the criteria for evaluating leaders are likely to be susceptible to gender bias (Domina, 2011; Hmurovic, 2012). Not only were males and females generally brought up in slightly different socio-cultural environments; they were exposed to gender-specific socialisation patterns and were orientated towards different role expectations and culturally-conditioned cognitive styles (Domina, 2011; Hmurovic, 2012; Merchant, 2012). Hmurovic (2012) adds that socialisation processes often generate behavioural expectations of men and women that are based on gender-based stereotypes. Stereotype-based expectations influence what information is noticed and attended to; they act like filters that cause us to focus on expectation-consistent information and away from expectation-inconsistent information. Stereotype-consistent information is also remembered with greater ease and thus influences what information will be recalled later on. Identification with a particular group with which one shares certain characteristics (such as gender) is powerful, and can also influence trust-related perceptions of others. McAllister (1995) and Mayer et al. (1995) found that people tend to trust those who are perceived to be similar to themselves more than those who are perceived to be dissimilar to them.

Measurement of Trust

Much work still needs to be done to improve trust measurement instruments, as several limitations have hampered progress thus far (Gillespie, 2012; McEviley & Tortoriello, 2011): First, there seems to be a mismatch between the defining features of trust and dimensions measured with the instruments. Research has neglected to link the conceptual definition of trust as 'willingness to be vulnerable' or 'intention to accept vulnerability' (Mayer et al., 1995, to appropriate measures thereof (Gillespie, 2012). The second limitation relates to the fragmented and idiosyncratic use of measurement instruments. Probably because trust is directly influenced by contextual factors – the nature and forms of vulnerability may after all vary between different types of relationships and circumstances (Gillespie 2003) – researchers seem to give preference to the development of tailor-made measurement instruments. Idiosyncratic ways of measurement make it difficult to determine how comparable research results are and the extent to which findings are truly diverging or not. Finally, a shortage of internationally acknowledged and properly validated measurement instruments hampers the advancement of our knowledge base on trust (Gillespie, 2012).

McEvily and Tortoriello (2011) identified the Behavioral Trust Inventory (BTI, Gillespie, 2003) as one of only a very few state-of-the-art instruments that captures the core element of trust – willingness to be vulnerable towards another party – which also has excellent psychometric properties. This instrument was initially developed firstly to assess one's willingness to accept vulnerability towards a specific trust target across multiple domains of trusting behaviour and secondly to sensitively measure trust in leader-member dyads and peer relationships in team settings (Gillespie, 2003). The BTI measures trust in terms of two dimensions, namely the willingness to rely on (reliance) and to disclose sensitive information (disclosure) to another. Gillespie (2003) argues that the reliance dimension represents a professional and more calculative basis of trust since it is anchored more strongly in an assessment of professional skills, competence and demonstrated dependability. In contrast, the disclosure dimension is similar to the notion of affective trust since it represents a stronger personal, i.e. emotional and relational, basis of trust.

When Gillespie (2003) developed this instrument (the BTI) construct, validity and predictive validity of the instrument were tested through a series of tests. Gillespie (2003) followed a qualitative process (96 interviews) to identify an initial item pool. This pool was tested in two separate pilot samples to identify differentiating items which were then tested in a cross-validation sample to confirm content validity. Exploratory and confirmatory factor analysis techniques revealed a two-factor structure, and after deleting cross-loading items, the

remaining 10 items differentiated two factors which showed high reliability ranging from 0.90 to 0.93 across the samples, and correlated between 0.61 and 0.71 across the samples.

The hypothesis-testing approach to establish construct validity revealed strong support for the hypothesised associations using cross-sectional, longitudinal and matched dyad samples, thereby providing evidence of the convergent validity of the Reliance and Disclosure scales. Confirmatory factor analyses provided evidence of divergent validity by showing that the two scales of the BTI were constructs distinct from trustworthiness, distrust and from each other (Gillespie, 2003). Predictive validity was supported by the finding that the BTI can predict leadership effectiveness up to 13% beyond that which is possible through existing measures of trust (Gillespie, 2003; Gillespie, 2012). Therefore this measure of trust can make a significant contribution to the literature on trust if employed on a much wider scale.

McEvily and Tortoriello (2011) strongly encourage researchers to confirm the statistical properties of the BTI in different countries. Few studies have unfortunately been conducted thus far; even in instances where the BTI was used, little or no information concerning its construct validity is provided, so that it is impossible to draw detailed comparisons. (For further information on the development and application of the BTI, see Burke et al., 2007, Lewicki et al., 2006). One exception is a study conducted by Zanini, Lusk, and Wolff (2009) in Brazil. These researchers employed the BTI and computed the split-half reliability measure of Cronbach over three study groups which rendered statistically significant values ranging from 0.92 to 0.94. Zanini et al. (2009) were also able to replicate the same factor configurations as were reported by Gillespie (2003). On factor one, the third question had the highest factor loading and on factor two the highest factor loading was reported for question eight.

Method

Participants

A convenience sample of 539 coded responses was drawn from an existing database at an internationally accredited business school. The database consists of responses obtained from a survey among private sector companies in the petrochemical and raw materials industries which was initially conducted to provide input for module development purposes, i.e. to bring a closer link between theory and practice. A total of 539 participants responded to the initial survey and resulted in a convenience sample which was used in its totality for

the present study. All respondents have a minimum qualification level of matric or higher and are employed in positions ranging from low, middle to senior levels of employment. The total sample ($n = 539$) consisted of 289 (54%) males and 250 (46%) females. The highest age distribution is between the age groups 31-40 years of age (37.4%). The majority of the sample group possesses a diploma or a bachelor's degree as highest level of education (45%) and the average length of service reporting to the current direct leader is more than 10 years.

Research Procedure

To obtain the initial data, the purpose and objectives of the study were stipulated on a cover letter and attached to a questionnaire, which was distributed to the participants. The cover letter stated that participation is completely voluntary and anonymous and that information obtained would be used for research purposes only. Permission to use the data was obtained from the university's ethics committee and a clearance number was obtained for this purpose.

Measuring Instrument

The BTI (Gillespie, 2003) is a 10-item measure of interpersonal trust as predominately manifested through two distinct types of trusting behaviour, namely reliance (items 1-5) and disclosure (items 6-10). Within a workplace context, the first five items measure the follower's willingness to rely on the direct leader's work-related skills, abilities and knowledge. The remaining five items assess the follower's willingness to disclose sensitive information of either a work-related or personal nature to the direct leader. Two example items are: "How willing are you to depend on your leader to back you up in difficult situations?" (reliance, item 5) and: "How willing are you to share your personal feelings with your leader?" (disclosure, item 6). Participants are requested to rate their willingness to demonstrate trusting behaviours towards the leader on a 7-point rating scale ranging from 1 (*not at all*) to 7 (*completely*).

Data Analysis

Confirmatory factor analyses (CFA) were performed through latent variable modelling methods as implemented by Mplus, version 7.2 (Muthén & Muthén, 1998-2012). The Maximum Likelihood Mean and Variance Adjusted estimator (MLMV) was used. MLMV provides for correction to estimates and standard errors and is used for data with outcome

variables that are continuous, non-normally distributed, and complete (Byrne, 2012a). It produces a chi-square statistic that is equivalent to the Satorra-Bentler chi-square statistic (Muthén & Muthén, 1998-2012). A critical assumption in the conduct of structural equation modelling is that the data are multivariate normal. However, Muthén and Muthén (1998-2012) point out that tests of multivariate normality are of less importance because non-normality robust estimators (e.g. MLMV and MLR) are available for use in Mplus. Under non-normality the normality-based maximum likelihood (ML) parameter estimates are quite robust, the standard errors MLMV gives are very good, and the MLMV chi-square test of model fit is very good. According to Byrne (2012b), a way of assessing the extent to which data might be non-normally distributed, is by testing a model on the basis of both the ML and the MLMV estimators. If there is a large difference between the two chi-square values, the MLMV is the most appropriate approach to the analyses.

The following indices produced by Mplus were used to test model fit: The Akaike Information Criterion (AIC) as a comparative measure of fit and Bayes Information Criterion (BIC) as an index of model parsimony (Kline, 2011) to assess model fit of non-nested models. Other fit indices used in this study were: absolute fit indices, which included the chi-square statistic, the standardised root mean square residual (SRMR) and the root means square error of approximation (RMSEA); incremental fit indices, which included the Tucker-Lewis Index (TLI); and the Comparative Fit Index (CFI) (West, Taylor, & Wu, 2012). The CFI compares the hypothesized and independent models, but takes sample size into account. The TLI is a relative measure of co-variation explained by the hypothesized model which has been specifically designed for the assessment of factor models. Critical values for good model fit have been recommended for the CFI and TLI to be acceptable above the 0.90 level (Wang & Wang, 2012), although Hu and Bentler (1999) recommended a cut-off value of 0.95. The SRMR is the square root of the average of the squared residuals (which were converted into a standardised metric) expressed on a scale from 0 to 1. Values for SRMR should be closer to 0, with 0.08 or lower as the recommended criterion (West et al., 2012). The RMSEA provides an indication of the overall amount of error in the hypothesized model-data fit, relative to the number of estimated parameters (complexity) in the model. The recommended acceptable levels of the RMSEA are 0.05 or less and it should not exceed 0.08. West et al. (2012) point out that cut-off standards for model fit recommended by Hu and Bentler (1999) were based on simulation studies and should be used as rough guidelines only, especially when they are extrapolated to models and data further away from confirmatory factor analysis models with complete data studied by Hu and Bentler (1999).

Given the findings of a poor-fitting initially hypothesised model, model development was done. Possible misspecifications, as suggested by so-called modification indices (MI), were identified to fit a revised, re-specified model to the data. An insignificant change in chi-square statistic ($\Delta\chi^2$) was considered evidence for invariance between the more restrictive and the comparison model, given that the CFI, TLI, RMSEA and SRMR displayed an acceptable overall model fit. The Δ CFI was also considered. A Δ CFI greater than or equal to 0.01 in magnitudes was regarded as an indication that the more restrictive model should be rejected (Wang & Wang, 2012). Raykov's (2009) confirmatory factor analysis-based estimate of scale reliability (ρ) was computed for each scale.

The following steps were followed in the analyses: a) The two-factor model of trust was tested in the male and female samples. We also checked whether the MLMV estimator was applicable to the analyses (by comparing the chi-square values obtained with the ML and MLMV estimators). b) Model development was done to improve the fit of the model. c) Configural, metric and scalar invariance for males and females were tested. d) If measurement invariance was supported, reliability coefficients were computed. e) Differences in latent means of the scales for males and females were tested.

Results

Testing the Two-factor Model

We divided the total sample according to gender in order to evaluate the hypothesised two-factor structure for the sub-groups separately: group 1 = males ($n = 289$); group 2 = females ($n = 250$). The chi-square values in both groups were substantially higher when ML rather than MLMV was used: Group 1: χ^2 (MLMV) = 97.13 and χ^2 (ML) = 232.42; Group 2: χ^2 (MLMV) = 122.83 and χ^2 (ML) = 268.26. Therefore MLMV was regarded as the most appropriate estimator for the analyses.

The model fit as well as the results of model re-specifications are summarised in Table 1. For males, Model 1.1a shows a significant χ^2 of 97.13 ($df = 34$). All other indices suggest an acceptable fit between the model and the data: CFI = 0.91 and TLI = 0.90, RMSEA = 0.08 and SRMR = 0.06. Inspection of the MI values revealed that the fit between the model (model 1a) and the data could be improved if the error variance of two items on the Reliance subscale, namely item 1 ("Rely on your leader's work-related judgments") and item 2 ("Rely on your leader's task-related skills and abilities") were allowed to correlate (MI= 32.63). After

allowing the error covariance of these two items, the revised model (model 1b) showed a significant improvement ($\Delta\chi^2 = 30.74$, $\Delta df = 1$, $p < 0.001$; lower values for AIC and BIC; CFI = 0.95, TLI = 0.94, RMSEA = 0.06 and SRMR = 0.05). The revised model was regarded as acceptable.

Table 1
Model Fit Statistics for Males and Females

Model	χ^2	df	P	$\Delta\chi^2$	CFI	TLI	RMSEA 90% CI $p \leq 0.05$	SRMR	AIC	BIC
Males										
1.1a	97.13	34	0.00	n/a	0.91	0.88	0.08 0.06-0.10 0.01	0.06	9950.51	10064.17
1.1b	66.39	33	0.00	30.74	0.95	0.94	0.06 0.04-0.08	0.05	9873.59	9990.91
Females										
1.2a	122.83	34	0.00	n.a.	0.86	0.82	0.10 0.08-0.12 0.000	0.07	8977.02	9086.19
1.2b	80.78	33	0.00	42.05	0.93	0.9	0.08 0.06-0.10 0.02	0.07	8878.91	8991.59

df = degrees of freedom; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residual; AIC = Akaike Information Criterion; BIC = Bayes Information Criterion.

For females, Model 1.2a did not fit the data well: $\chi^2 = 122.83$; $df = 34$, $p = 0.00$. With the exception of the SRMR value of 0.07, the remaining comparative fit indices all indicated a poor fit of the model to the data: CFI = 0.86; TLI = 0.82; RMSEA = 0.10. After inspection of the MIs in order to detect possible misspecifications, the measurement errors of item 1 (“Rely on your leader’s work-related judgments”) and item 2 (“Rely on your leader’s task-related skills and abilities”) (MI= 46.28) were allowed to correlate, which are two closely-related indicators on the Reliance dimension. In comparison with Model 1.2a, Model 1.2b produced a result that is significantly closer to the theoretical model: ($\Delta\chi^2 = 42.05$, $\Delta df = 1$, $p < 0.001$; CFI = 0.93, TLI = 0.90, RMSEA = 0.08 and SRMR = 0.07).

Correlated errors may occur because of overlap in item content. Because items 1 and 2 had overlapping content and their errors covaried in the male and female samples, and based on the argument that the specification of a model that forces error parameters to be uncorrelated is rarely appropriate with real data (Bentler & Chou, 1987), we considered it realistic to incorporate the correlated errors in this study, rather than to ignore their presence.

Measurement Invariance

Three different levels of measurement invariance were examined in a series of hierarchical steps, namely configural, weak (metric), and strong (scalar) measurement invariance.

Configural Invariance

Results for the configural model, where all parameters were constrained, show that the $\chi^2 = 146.14$, $df = 66$, $p = 0.000$ is statistically significant. However, it is known that χ^2 is too strict to be used in isolation. The comparative fit indices furthermore all showed acceptable values (see Table 2). These findings suggest that the configural model is acceptable if factor loadings and intercepts are not assumed to be equal between the male and female groups. Because configural invariance was demonstrated across gender, it was possible to perform further increasingly restrictive multi-group analyses to test the invariance of different model parameters across the two groups. Overall and comparative model fit results for tests of measurement invariance are depicted in Table 2.

Table 2

Fit Indices for Invariance Tests

Model	χ^2 (df)	$\Delta\chi^2$ (Δdf)	CFI (ΔCFI)	TLI	RMSEA ($p \leq 0.05$)	RMSEA (90%CI)	SRMR
Configural model (Model 2a)	146.14 (66)	-	0.94 -	0.92	0.07 (0.03)	0.05-0.08	0.05
Metric/weak invariance (Model 2b)	156.80 (74)	10.88 (8)	0.97 (-0.03)	0.97	0.06 (0.05)	0.05-0.08	0.08
Scalar/strong invariance (Model 2c)	174.63 (84)	31.82* (18)	0.93 (0.01)	0.93	0.06 (0.05)	0.05-0.08	0.06
Revised scalar/strong invariance / Model 2c(1)	168.25 (83)	19.75 (17)	0.94 (0.00)	0.93	0.06 (0.08)	0.05-0.08	0.06
Testing invariance of marker items factor loadings phase 2 (Model 2d)	148.16 (68)	1.60 (2)	0.94 (0.00)	0.92	0.07 (0.04)	0.05-0.08	0.05
Factor mean invariance/ Model 2e	164.75 (81)	16.10 (15)	0.94 (0.00)	0.93	0.06 (0.07)	0.05-0.08	0.06

* $p < 0.01$ ***Metric Invariance***

Fit statistics for Model 2b indicate that the $\chi^2 = 156.8$, $df = 74$, which is statistically significant ($p = 0.000$). The comparative fit indices all indicated an acceptable fit: CFI = 0.94, TLI = 0.93, RMSEA = 0.06 and SRMR = 0.06. When compared with the unrestricted configural model, results for the restricted model (Model 2b) show an insignificant difference ($\Delta\chi^2 = 10.88$, $\Delta df = 8$, $p = 0.21$). This suggests that the factor loadings are equal between the samples across gender and that the items of the BTI may be interpreted to measure the same constructs in the male and female groups. The fact that factor loadings are invariant across groups provides support for Hypothesis 2a. Furthermore, when testing invariance of marker items, there were no significant differences between the models where the first item on each factor was fixed, compared to the model where these were allowed to vary freely (Model 2c). When comparing findings with the configural model, no significant differences were found either. Therefore, it can be concluded that the factor loadings on the marker items are invariant.

Scalar Invariance

Scalar invariance was tested by also constraining the item intercepts to be equal. Model 2c showed a reasonable overall fit ($\chi^2 = 174.63$, $df = 84$, CFI/TLI = 0.93, RMSEA = 0.06, SRMR = 0.06) with the observed data. When this nested model was compared with the configural model, some small differences between the groups became evident: whereas the $\Delta CFI = 0.01$ showed that the groups are invariant, this was in contrast with the chi-square difference test result ($\Delta\chi^2 = 31.82$, $\Delta df = 18$, $p = 0.023$; $\Delta CFI = 0.01$), which suggests that the intercepts for the gender groups are not invariant. Inspection of the data indicates that invariance could be improved if the constraint on the factor loading of item 10 for the female group was relaxed (MI 10 = 5.47).

In the revised Model 2c(1), item 10 was not restricted for group 2. Compared to the previous model (Model 2c), the re-specified model (Model 2c(1), where the intercept on item 10 was allowed to vary freely for group 2, showed a better overall fit to the observed data ($\chi^2 = 168.25$, $df = 83$, CFI = 0.94 and TLI = 0.93; RMSEA = 0.06, SRMR = 0.06). Model 2c(1) furthermore showed a significant improvement on the previous model ($\Delta\chi^2 = 19.75$, $\Delta df = 17$, $p = 0.29$), thereby indicating that the intercepts for the gender groups are, with the exception of item 10, invariant ($\Delta\chi^2 = 19.75$, $\Delta df = 17$, $p = 0.29$). Since findings suggest that respondents from the female group may be using different conceptual frames of reference when responding to item 10 on the Disclosure scale, only partial support for hypothesis 2b was obtained.

Test of Factor Means Across Gender

Given that at least two indicators of each of the factors are scalar invariant – in fact, invariance constrained was relaxed for only one item on the second scale – we proceeded with yet more comparisons on the latent factor means across groups. A model constraining latent factor mean was first tested ($\chi^2 = 164.75$, $df = 81$, CFI = 0.94, TLI = 0.93; RMSEA = 0.06, SRMR = 0.06) and compared with the configural model. Since the model did not differ significantly from the comparison model ($\Delta\chi^2 = 16.10$, $\Delta df = 15$, $p = 0.375$), it was meaningful to compare the factor means of the gender groups.

It is clear that there are no significant differences between the mean scores of males and females on either the reliance dimension ($p = 0.109$) or the disclosure dimension ($p = 0.934$). Since these findings indicate that males and females do not differ significantly regarding their

levels of trust in any of the scales, hypotheses 3a and 3b cannot be rejected. The scale reliabilities (Raykov, 2009) of the scales as analysed for the male and female groups separately were acceptable ($\rho > 0.70$). The standardised factor loadings and scale reliability as calculated separately per gender group, as well as the correlations between factors according of the final model, model 2d, are displayed in Table 3.

Table 3: Standardized loadings and factor correlations of Model 2d

Group 1:	Male				Group 2:	Female			
	Estimate	S.E	EST/S.E	p		Estimate	S.E	EST/S.E	p
Reliance									
Item 1	0.70	0.03	20.55	0.00		0.64	0.05	13.93	0.00
Item 2	0.72	0.03	21.79	0.00		0.70	0.04	17.28	0.00
Item 3	0.82	0.03	25.16	0.00		0.78	0.04	21.60	0.00
Item 4	0.85	0.03	25.25	0.00		0.85	0.03	32.09	0.00
Item 5	0.77	0.03	25.62	0.00		0.75	0.04	19.72	0.00
Disclosure									
Item 6	0.73	0.03	22.96	0.00		0.72	0.03	23.60	0.00
Item 7	0.83	0.03	33.56	0.00		0.79	0.03	27.64	0.00
Item 8	0.79	0.03	31.62	0.00		0.82	0.03	31.14	0.00
Item 9	0.73	0.03	22.60	0.00		0.75	0.03	24.26	0.00
Item 10	0.74	0.03	24.91	0.00		0.66	0.03	20.21	0.00
Reliability									
Reliance	0.86	0.02	46.52	0.00		0.83	0.03	33.84	0.00
Disclosure	0.85	0.02	43.80	0.00		0.85	0.02	42.07	0.00
Mean									
Reliance	4.70	-	-	-		4.86	-	-	-
Disclosure	4.02	-	-	-		4.04	-	-	-
Variance									
Reliance	1.18	-	-	-		1.23	-	-	-
Disclosure	1.82	-	-	-		2.05	-	-	-

Note: All p-values were significant, $p < 0.01$

Discussion

The aim of this study was to investigate the measurement invariance of the Behavioral Trust Inventory for managers of different genders. Findings provide support for a two-factor structure of the BTI consisting of Reliance and Disclosure. This finding is consistent with previous research conducted in Australia by Gillespie (2003) as well as in Brazil by Zanini et al. (2009), thereby contributing to a broader base of evidence upon which to evaluate the validity and generalizability of the BTI. In assessing its measurement invariance across groups, configural and metric invariance and partial scalar invariance were established. One item of the BTI (measuring willingness to share personal beliefs with your leader) was found to be biased towards females. Latent factor mean analyses revealed no significant differences between males and females on the scales, suggesting that they show similar levels of trust after the biased item was removed. This finding is contrary to that of Zanini et al. (2009) who reported gender differences in the levels of trust in the Brazilian study.

No differences were found on the factor loadings and intercepts, with the exception of item 10, which had a higher intercept for males than for females. This finding suggests that men and women use different conceptual frames of reference when considering the sharing of personal beliefs with their leaders. Consequently comparisons of male to female responses on this item may lead to misinterpretations. Males and females may differ in their willingness to share their personal beliefs because they attach different connotations to the idea itself of 'sharing'. Gender-based personality differences suggest that females are more concerned with feelings than with ideas and are higher in nurturance and submissiveness (Costa, Terracciono, & McCrae, 2001), which could lead women to attach a different meaning to the phrase 'share beliefs' because they might assume that it involves something more than the expression of cognitive-based views.

Gender-based personality differences may also influence the topics, contexts and ways in which women prefer to express themselves. Previous research indeed showed that social preferences of women are more situational specific (Croson & Gneezy, 2009). They generally prefer to share their opinions in close relationships rather than in impersonal, distant relationships and tend to disclose personally meaningful information, while men primarily disclose superficial information (Payne, 2001). These preferences may imply that women require themselves to share more extensively before they actually perceive such an activity as 'sharing'. On the other hand, it could simply take a longer time to develop an affect-based level of trust (McKnight, Cumming, & Chervany, 1998); therefore, women would be more hesitant to share their beliefs. Research on psychological gender differences in

communication styles shows that males and females differ in the way they communicate and attempt to influence others (Merchant, 2012). Women may specifically require an emotional bond or deeper level of emotional intimacy to exist before they regard the sharing of their personal beliefs as appropriate, while men merely assume a cognitive level of involvement when doing so.

Differences may also be attributable to opposing values and expectations. The internalisation of gender-specific roles as part of the socialization process to fit into a particular culture (Costa et al., 2001; Gilbert, Burnett, Phau, & Haar, 2010) leads males and females to present themselves in ways congruent to what they perceive to be an appropriate level of masculinity and femininity. Gilligan (1993) argues that the interaction effect of gender-based norms and the need to preserve relationships may cause females to suppress their own opinions and ideas – even at the expense of authenticity. From this perspective, women may be less willing to share their beliefs with a superior because they conform to the gender-based stereotype of having to be submissive.

Merchant (2012) found that stereotypical gender roles act as guidelines for workplace behaviour by subconsciously dictating how one is to communicate and conduct oneself based on one's gender. Moreover, stereotypes become invisible yet powerful barriers ingrained in patterns of interactions, workplace structures, practices and patterns of interactions that put women at a disadvantage (Patel & Buiting, 2013). Since most senior management positions in South African businesses are still predominantly occupied by males (Grobler, Wörnich, Carrel, Elbert, & Hatfield, 2011; Swanepoel, Erasmus, Schenck, & Tshilongamulenzhe, 2014), and females still experience discrimination and stereotyping in many workplaces in South Africa (Swanepoel et al., 2014; Werner et al., 2011), it seems likely that such perceived gender-based discrepancies may lead women to believe that authority figures attach less value to their opinions or provide less support to their ideas as opposed to those of males.

The fact that both genders experienced similar mean levels of trust in their managers is consistent with a previous, unpublished South African-based study (Gunpath, 2006), which employed an alternative trust measure developed by McAllister (1995). Similar mean levels of trust suggest that managers do not need to differentiate on the basis of gender when allocating their time, energy and resources to build and maintain trust within the workforce. Mean levels of trust were also found to be above average, which suggests that participants across genders are generally willing to demonstrate trust in their managers through actual risk-taking behaviour. When comparing mean scores of the sub-dimensions of trust,

participants are more likely to engage in trusting behaviours towards their leaders based on a professional/cognitive basis, rather than on an affective basis of trust.

This study had various limitations. Firstly, a lack of empirical research currently exists on the validation of the BTI within different contexts, which makes it difficult to compare the findings. This study focused on the validation of the BTI within a specific environment and with a specific trust referent in mind. Because trust is context specific in nature, it cannot be automatically assumed that findings are applicable to multiple settings without testing the validity of the BTI for the new context first. Future studies need to examine applicability of the BTI across diverse South African cultural groups and for several foci of trust, such as co-workers and top management. Secondly, the gender of the direct leader was not controlled for. Being able to match responses within paired dyads might have added useful information to help us understand the findings. Thirdly, the BTI was administered in English, which could have caused problems with interpretation of some questions, for respondents' mother tongue is not necessarily English. In future, it might be useful to translate the questionnaire into other South African languages as well.

Recommendations

The fact that partial measurement invariance has been demonstrated across groups indicates that the BTI can be considered a useful tool for assessing interpersonal trust within a South African workplace setting. Although quite stringent tests have been applied, it should be noted that item 10 demonstrates measurement bias for the female group; hence results for this item should be treated with caution.

The examination of the measurement invariance of the BTI on a larger sample using a mixed method approach is recommended. In particular, reasons for possible item response bias on item 10 should be explored in more depth in an effort to improve full invariance of the BTI for a South African-based workplace context. Future research should also take into consideration more variables that could have influenced trust decisions within a particular setting.

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CHAPTER 3: RESEARCH ARTICLE 2

Dimensionality of Trust: an Analysis of the Relationship between Propensity, Trustworthiness and Trust

Manuscript 2, entitled “Dimensionality of trust: an analysis of the relationship between propensity, trustworthiness and trust”, will answer the following secondary research question: “What are the relationships between selected predictors of trust (propensity and trustworthiness) and willingness to actively engage in trusting behaviour?”

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Dimensionality of Trust: an Analysis of the Relationship between Propensity, Trustworthiness and Trust

Abstract

Orientation. Research concerning trust relationships on the interpersonal level, particularly when studied in dyadic relationships from the follower's point of view, is relatively scarce. Only a few researchers have attempted to link multiple dimensions of trust in the same study.

Research purpose. This study examined the dynamic interplay between trust propensity, trustworthiness beliefs and the decision to trust, as perceived within dyadic workplace relationships.

Motivation for the study. No studies as far as the authors are aware of, have ever attempted to use a combination of Mayer and Davis's (1999) well known assessment of trustworthiness and Gillespie's (2003) measure of behavioural trust within the same study. By including measures of main antecedents and the actual decision to trust in the same study, the multidimensionality of trust can be established more concretely.

Research design, approach and method. A cross-sectional survey design with a convenience sample ($N=539$) was used. The Behavioural Trust Inventory and the Organisational Trust Instrument were administered.

Main findings. Results confirmed the distinctness of propensity, trustworthiness and trust as separate main constructs. Trust was strongly associated with trustworthiness beliefs. Trustworthiness beliefs fully mediated the relation between propensity and trust. The observed relations between propensity and trustworthiness suggest that individuals with a natural predisposition to trust others will be more inclined to perceive a specific trust referent as trustworthy.

Practical implications. Leaders should realise that their attitudes and behaviour have a decisive impact on trust formation processes - if they are being perceived as trustworthy, followers will be likely to respond by engaging in trusting behaviours towards them. Tools to assess followers' perceptions of the trustworthiness of the leader may provide useful feedback that can guide leaders.

Contribution. This study contributes to scientific knowledge regarding the influence of propensity to trust and trustworthiness on trust of leaders.

Key terms: Trust, trustworthiness, propensity, ability, benevolence and integrity

The ability to establish, nurture and restore trust is vital to leadership success in the new global economy (Covey, 2006; Greene 2012; Salamon & Robinson, 2008). The modern workplace has undergone some dramatic changes that, in effect, have reduced reliance on traditional bases of power such as derived from formal positions of authority. Drivers of change such as globalisation, diversity and technological innovations brought about an increased emphasis on the interaction and self-directedness of employees, as well as more flexible work structures that are difficult to exercise control over (Green, 2012; Grey & Garsten, 2001). Changes affect macro, meso and micro systemic levels of organisations and tend to create an increased reliance on complex matrix systems of authority to resolve multiple and often competing demands for limited resources (Greyvenstein & Cilliers, 2010). Leadership not only demands the ability to empower both leaders and followers to function effectively within a matrix system, but also implies awareness of multiple leadership roles, the ability to move between different types and styles of leadership, and advanced skills to manage complex interpersonal relationships (Greyvenstein & Cilliers, 2010). Ultimately, changes in the workplace environment have led to an increased reliance on trust as a mechanism to coordinate and control interdependent activities, for in such a dynamic and fast changing environment it is impossible to contract everything (Gambetta, 2008; Sydow, 2008; Tichy & Bennis, 2007).

An overwhelming body of research has established that trust indeed contributes significantly to leader effectiveness (Bachraim & Hime 2007; Douglas & Zivnuska, 2008; Wasti, Tan, Brower, & Önder, 2007). Employee decisions to trust a direct leader are furthermore highly influenced by the character, words and actions of the leader (Costigan *et al.*, 2007; Dirks & Ferrin, 2002; Tan & Lim, 2009). In fact, research has shown that the seniority of the position of a trusted party influences the relative importance attached to characteristics – the more senior the position, the more influential the consideration of characteristics becomes in the decision to trust (Burke, Simms, Lazzara, & Salas, 2007). It is therefore important that leaders should put in a concerted effort to build and improve trust relationships with their followers (Burke *et al.*, 2007).

The ability to inspire trust is, however, not an easy task to accomplish. In fact, the incapability to enthuse trust is often listed as one of the most important reasons why leaders fail (Burke, 2006; Pienaar, 2009). The 2011-2012 Kenexa High Performance Institute Work Trends report established that only 48% of all employees who participated in this worldwide survey trusted their leaders, whilst 28% actively distrusted their leaders and 24% were undecided. South African-based research showed varied findings. Previous research on general followership's experiences of organisational leadership revealed that followers have

a negative leadership view and also highlighted other themes including an idealisation of the past and blaming of the present, obsession with race and gender and a constantly changing identity (Greyvenstein & Cilliers, 2010). Regarding an analysis of trust relationships specifically, Bachraim and Hime (2007) found that workplace trust is moderately high, with the highest levels of trust to be in supervisors. In contrast, research by Esterhuizen and Martins (2008) point to the existence of a significant trust gap between employees in general and their employers. In yet another study, Steinman and Martins (2009) attempted to identify the 10 key problem areas that impede team functioning in South African organisations, and found a lack of trust in superiors, higher authority and colleagues to be amongst the most important reasons for poor performance. Furthermore, Van der Ohe and Martins (2010) found significant differences in the levels of organisational trust between government participants and other sectors.

Both the significance of trust for meaningful interpersonal relationships and the difficulty to inspire trust in others underscore the importance of understanding trust-building as a management intervention. In view of the above findings, it is important to realise that specific leader behaviours are quite influential in creating a history of experiences that serve to either build or erode trust in leadership. Kramer succinctly reminds us that “although trust may be desirable in the abstract, it really makes sense only when those trustees on whom people depend are deserving of that trust” (2006, pp. 10-11).

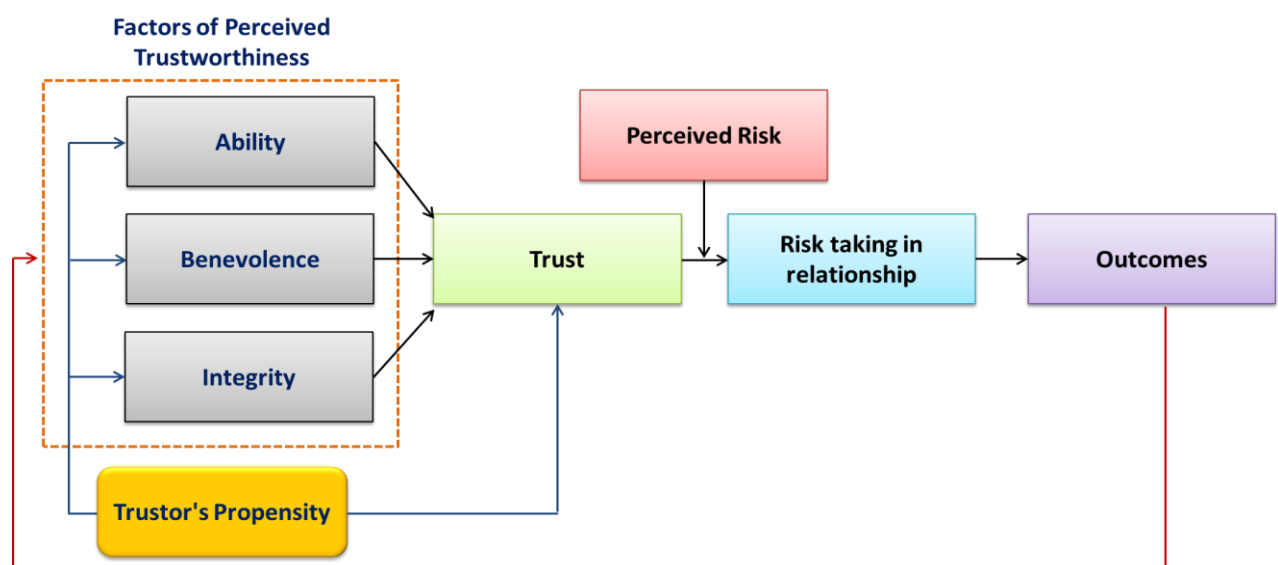
Model of Trust

Different conceptualisations of trust have hindered previous research on trust, particularly due to a lack of clear differentiation among factors that contribute to trust, trust itself, and the outcomes of trust (Mayer *et al.*, 1995).

Mayer *et al.* (1995) attempted to clarify some of these confusions. Their multi-dimensional definition of trust is one of the most widely accepted (Rousseau, Sitkin, Burt, & Camerer, 1998; Wasti *et al.*, 2007) and most cited definitions of trust in the organisational science literature (Ball, 2009; Gillespie, 2012). They define trust as: “the 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” (Mayer *et al.*, 1995, p. 712). Werbel and Henriques (2009, p. 781) simplify this to “the willingness to make oneself vulnerable to another person despite uncertainty regarding motive and prospective actions”, thereby underscoring the fact that risk-taking, vulnerability and uncertainty are core elements of a trusting relationship.

Mayer *et al.* (1995) and Schoorman, Mayer, and Davis (2007) developed an extensive and integrated model of interpersonal trust that provided a turning point for trust research (Ball, 2009). By 2009, Mayer *et al.*'s (1995) seminal work had been cited in the literature more than 2 900 times (Ball, 2009) and by 2013 more than 149 000 times (Google Scholar, 2013). Their model was one of the first to conceptualise trust as a multi-dimensional concept that is essentially relational/interpersonal and context-specific in nature: Rather than seeing trust merely as an individual characteristic that remains constant regardless of context, their model defines trust as relational, therefore largely dependent on characteristics of both the trustor (the person who trusts) and the trustee (the person to be trusted) within a specific relationship that varies in depth and strength over time (Mayer *et al.*, 1995; Schoorman *et al.*, 2007).

Not only does the model account for the interpersonal and possibly reciprocal nature of trust, it also considers the influence of perceived risk and helps to explain why some individuals are trusted more than others (Mayer *et al.*, 1995). The relation between conditions for trust, trust itself and its outcomes are illustrated in Figure 1 (Mayer *et al.*, 1995):



Source: Mayer *et al.*, 1995, p.715

Figure 1: Integrated model of interpersonal trust

The core element of the model centres on trust itself, which signifies an intention to accept vulnerability towards another, as is evidenced by the actual decision to trust (Schoorman *et al.*, 2007). The willingness to accept vulnerability towards another party and to take risks within the relationship, is sometimes referred to as “behavioural trust” (Gillespie, 2003) or

“volitional trust” (Caldwell & Dixon, 2009; McEvily & Tortoriello, 2011). Trust can manifest in different forms, such as to be willing to rely on and/or disclose information to a leader (Gillespie, 2003). A proper measure of trust should therefore assess the extent to which the trusting party is willing to allow the trustee to have significant influence over his/her life (Gillespie, 2003; Schoorman *et al.*, 2007) within a specific context, such as at the place of work (Colquitt & Rodell, 2011).

The model furthermore indicates trait factors such as the trustor’s propensity, and perceptions of trustee characteristics comprising trustworthiness such as ability, benevolence and integrity, are antecedents of trust (Mayer & Gavin, 2005). It is therefore important to realise that the antecedents of trust should be differentiated from trust itself (Mayer *et al.*, 1995; Schoorman *et al.*, 2007).

Antecedents of Trust

Propensity indicates a consistent tendency to be willing to trust others across a broad spectrum of situations and trust targets (McKnight, Cumming, & Chervany, 1998). This suggests that every individual has some baseline level of trust that will influence the person’s willingness to rely on the words and actions of others. Propensity is thought to drive trusting beliefs, especially when little information about the trustee is known, such as at the early stages of a relationship (Colquitt, Lepine, & Wesson, 2009), and in ambiguous situations (Gill, Boies, Finegan, & McNally, 2005). However, the influence of one’s disposition to trust is not limited to such situations, as propensity can still shape trusting beliefs even after more information about the trustee becomes available (Searle *et al.*, 2011). This is because propensity acts like a filter that colours the interpretations of others’ actions and perceived trustworthiness, thereby serving as a platform from which the leap of faith to trust can be taken, but retaining the impact of one’s predisposition even after trustworthiness can be inferred (Colquitt, Scott, & LePine, 2007).

Trust is also understood as a complex compilation of judgements by the trustor on different characteristics of the trustee. Although numerous characteristics can influence one’s judgement of another’s trustworthiness, Mayer *et al.* (1995), after conducting a thorough review of factors that lead to trust, concluded that mainly three characteristics, namely ability, benevolence and integrity, explain a major portion of trustworthiness and are considered to be the most salient (Mayer *et al.*, 1995). Both Burke *et al.* (2007) and Colquitt *et al.* (2009) confirmed through their research that the wider variety of characteristics mentioned in the literature are indeed indicative of the same underlying constructs and

essentially relate to perceptions of the trustee's character (expressly integrity), capacity (particularly competence and expertise) and goodwill. According to the 2011-2012 Kenexa High Performance Institute Work Trends report, these three antecedents – ability, benevolence and integrity – explain up to 80% of the decision to trust.

Ability is “that group of skills, competencies, and characteristics that enable a party to have influence with some specific domain” (Mayer *et al.*, 1995, p. 717); it captures the ‘can-do’ component of trustworthiness (Colquitt *et al.*, 2007). *Benevolence* refers to the trustee's intention to do well to others without having an egocentric profit motive (Schoorman *et al.*, 2007). Benevolence corresponds best to the ‘will-do’ component of trustworthiness (Colquitt *et al.*, 2007) and is closely associated with synonyms such as loyalty, openness, caring and supportiveness (Mayer *et al.*, 1995). Since ‘can-do’ does not *necessarily* result in ‘will-do’, it is evident that benevolence affects trust separately and independent of the ability component (Colquitt *et al.*, 2007). Benevolent leaders nevertheless maintain perspective in that they strike a balance between a deep personal commitment to the welfare of others while simultaneously furthering the best interests of the organisation (Caldwell & Dixon, 2009). *Integrity* is defined as “the trustor's perception that the trustee adheres to a set of principles that the trustor finds acceptable” (Mayer *et al.*, 1995, p. 719). Integrity can be judged by examining previous behaviours, reputation, the similarity between the behaviour of a trustee (e.g. a leader) and the trustor's (e.g. a follower's) internal beliefs, and the consistency between words and actions (Mayer *et al.*, 1995).

Perceptions of trustworthiness influence the degree of risk that a trustor is willing to take within a particular relationship. If a leader is perceived to be untrustworthy, an employee will most likely conclude that trusting such a leader will lead to disappointment, as the outcome of trust may have unfavourable consequences for personal psychological safety. The perceived trustworthiness of a trustee is therefore pivotal to enable the necessary cognitive “leap of faith” for the decision to trust (Mollering, 2006).

Outcomes of Trust

The final component of the proposed trust model (Mayer *et al.*, 1995; Schoorman *et al.*, 2007) addresses the outcomes of trust, which are various types of actual risk-taking in the relationship with the trustee (Mayer & Davis, 1999). Mayer and Gavin describe the relation between trust and its outcomes as follows: “Trust is a generalized behavioral intention to take risk, whereas the outcome is actually taking risk” (Mayer & Gavin, 2005, p. 874). This component also includes a feedback loop, which allows the trustor to evaluate outcomes of

previous vulnerability and a subsequent re-appraisal of trustworthiness (Mayer & Gavin, 2005). This feedback loop allows for exogenous factors that can change perceived trustworthiness, such as when the trustor receives information regarding the character of the trustee from a third party. The re-appraisal that may occur in the latter instance is not necessarily directly through increased vulnerability or risk-taking in the relationship, but rather as a result of a learning curve that took place (Mayer & Davis, 1999).

Relations between Components of Trust

Mayer *et al.* (1995) and Schoorman *et al.* (2007) emphasise that the antecedents of trust – propensity and trustworthiness beliefs – affect the trust action, but cannot be equated to trust itself. Trustworthiness refers to attributes of a trustee that inspires trust, while trusting is something that the trustor does; therefore, trustworthiness and trust are two separate constructs. Gillespie (2003, 2012) elaborates on this point by explaining that, even though one may perceive someone else as trustworthy, it does not automatically follow that one would actually engage in trusting behaviour towards that person. In contrast, one's willingness to actively engage in trusting behaviours towards a trust target indicates actual risk-taking within the relationship and should therefore serve as a closer proxy for trust.

A's belief in B's trustworthiness is nevertheless expected to be a strong predictor of A's decision to trust B, since the belief is based on probabilities (Nooteboom, Berger, & Noorderhaven, 1997) and carries a crucial "strength of feeling" (Bhattacharya, Devinney, & Pillutla, 1998, p. 462) that elevates it above mere hopefulness, blind faith or gullibility (McEvily, Perrone, & Zaheer, 2003). Therefore, even though trustworthiness and trust are two separate concepts, they are very closely related since interpersonal trust cannot exist without a positive assessment of the trustee's trustworthiness.

Colquitt *et al.* (2007) previously explored the relation between precursors of trust, trust itself and several organisational outcomes. The mentioned researchers conducted an extensive meta-analysis including 132 independent samples, but failed to reach a conclusive answer regarding the strength of the relations between the variables in their study. Obviously, a meta-analysis incorporates the limitations of the studies on which it is built. Another important limitation was the fact that they could only examine the main effects of the variables on trust. The potential effects of propensity on the relation between trustworthiness and trust could not be assessed, because meta-analytical structural equation modelling is ill suited to do this (Colquitt *et al.*, 2007).

The proper exploration of the relation between propensity, trustworthiness and trust implies that a more complete understanding of trust should ideally involve a comprehensive measure that includes an assessment of both the decision to trust as well as its antecedents within the same study. McEviley and Tortoriello (2011) support this view by emphasising the necessity in further research to a) operationalise trust as a multidimensional construct, b) to empirically assess the extent to which distinct dimensions exist and c) to assess the nature and degree of their relation with each other. Dietz and Den Hartog (2006) recommend that a comprehensive measure of trust should capture both the respondent's beliefs about the trustee as well as the intention to act on such beliefs. This approach is advisable because, as Dietz and Den Hartog (2006) correctly point out, the mere knowledge that someone is considered trustworthy does not necessarily imply that the trustor intends to act on such beliefs. Therefore, the inclusion of a measure to assess the decision to trust, in addition to measures of trustworthiness, would provide a more comprehensive understanding of the trust process.

Research Aim and Hypotheses

This study aims to explore dimensions of trust (i.e. the precursors of trust in relation to trust itself) as they manifest in the dyadic relationship between employees in general – i.e. without differentiating between specific demographic groups - and their leaders. The decision not to differentiate followers on the basis of more specific demographic sub-groups was based firstly on the need to compare trends with previous research in other countries which did not necessarily use such specific differentiations between sub-groups in their studies. Although it is acknowledged that members of the same race, gender, generation or any other demographic group may be inclined to use perceived similarities as foundation for interpersonal trust, previous research established – quite contrary to popular belief - that the similarity-trust versus dissimilarity-distrust paradigm is inadequate to explain trust decisions (Lau, Lam & Salamon, 2008; Williams, 2001). Lau *et al.* (2008) argued that trust decisions are not necessarily determined by perceived similarity of one specific demographic attribute only, but rather by an interaction effect of various categories with which one may identify - (being white, female *and* belonging to a younger generation for instance). Welter and Alex (2012) furthermore highlight the fact that individuals who do not share a common cultural history or background can still trust each other through shared positive experiences of an alternative nature, such as through repeated successful business exchanges with each other over time.

Although societal and organisational contingencies also influence trust decisions, this research does not focus on the macro- and meso level factors that influence trust but instead focuses only on an individual (micro) level of analysis. The study is confined to employee trust in direct leaders within private sector companies within a South African workplace context. It seeks to understand how specific antecedents of trust influence follower decisions to place trust in their leaders, explicitly in terms of their willingness to accept vulnerability and to take risks within the relationship.

This study seeks to make both a theoretical and an empirical contribution to the trust literature by examining antecedents of trust as based on the theoretical model developed by Mayer *et al.* (1995), in relation to the decision to trust, operationalised by various dimensions of vulnerability, as advanced by Gillespie (2003, 2012). The aim is to answer the following main research question: Which antecedent of trust – propensity or trustworthiness beliefs – can be regarded as the strongest predictor of the decision to trust, as evidenced by a willingness to rely on and disclose information to a trust referent? The research is primarily interested in establishing the above relations within the context of dyadic interpersonal workplace relationships, specifically from the follower's point of view. The following hypotheses are proposed:

Hypothesis 1: Propensity is significantly and positively related to trustworthiness beliefs.

Hypothesis 2: Propensity is significantly and positively related to the reliance and disclosure dimensions of trust.

Hypothesis 3: Trustworthiness beliefs predict trusting behaviour.

Hypothesis 4: Trustworthiness mediates the relation between propensity and trust.

Research concerning trust relationships on the interpersonal level, particularly when studied in dyadic relationships from the follower's point of view, is relatively scarce (Bachraim & Hime, 2007). In addition, only a few researchers have attempted to link multiple dimensions of trust in the same study (Dirks & Ferrin, 2002; Gillespie, 2003). In fact, the inclusion of multiple types of scales in a single study on trust is extremely rare (Colquitt *et al.*, 2007). In the few cases where more than one measuring instrument were included in the same study to link trustworthiness components to the decision to trust, the scales developed by Mayer and Davis (1999) were used, despite known problems with reliability experienced specifically with the four-item trust scale. Although Gillespie (2003) developed the Behavioural Trust Inventory (BTI) as an alternative trust measure, no studies as far as the authors are aware of, have ever attempted to use a combination of Mayer and Davis's (1999) well known assessment of trustworthiness and Gillespie's (2003) measure of behavioural trust within the

same study. This is even more surprising, considering the fact that the BTI was not only endorsed for future replication as an excellent measure for trust (McEvily & Tortoriello, 2011) but was also specifically recommended for the exploration of the relationship between trustworthiness and the two dimensions of trust as differentiated by the BTI (Gillespie, 2003).

By including measures of main antecedents and the actual decision to trust in the same study, the multidimensionality of trust can be established more concretely. In addition, it would provide valuable information on trust-inducing interventions to promote decisions to trust. If the nature and strength of relations between conditions for trust and trust itself could be determined, this knowledge could assist management in identifying risk patterns and devising more focused strategies to improve intra-organisational dyadic relationships within companies. Such knowledge can also help management decide on how and where resources should be employed to build workplace trust.

Research Design

Research Approach

A cross-sectional survey design with questionnaires as method of data collection was used to obtain information from the target population.

Research Method

Participants

Contextual factors for this study are limited to intra-organisational dyadic workplace relationships. The focus on followers and their direct leaders was selected due to its critical importance to performance outcomes. The study is further confined to workplace relationships within three Johannesburg Stock Exchange (JSE) listed private sector companies with an international footprint operating from the same geographical area of South Africa.

A convenience sample of 539 coded responses was drawn from an existing database, consisting of responses obtained from a survey among private sector companies in the petrochemical and raw materials industries. All respondents have a minimum qualification level of grade 12 or higher and are employed in positions ranging from low-, middle- to senior levels of employment. The total sample ($n = 540$) consisted of 290 (54%) males and

250 (46%) females; 53% were black and 47% were white. The highest age distribution is between the ages 31 and 40 years of age (37.4%), which is an indication that the employees are relatively in the middle of their working life. The majority of the sample group possesses a diploma or a bachelor's degree as highest level of education (45%) and the average length of service reporting to the current direct leader is more than 10 years.

Measures

The Behavioural Trust Inventory (BTI; Gillespie, 2003) was used to measure trust between employees and their leaders. A key benefit of adopting this instrument is that it is a multi-dimensional measure of trust, which is particularly important since decisions regarding the willingness to render oneself vulnerable through trusting behaviour can manifest in different ways (McEvily & Tortoriello, 2011). The BTI consists of two scales, namely, reliance-based trust (items 1-5) and disclosure-based trust (items 6-10). Participants were requested to rate their willingness to demonstrate trusting behaviours towards their direct leader on a seven-point rating scale ranging from 1 (*not at all*) to 7 (*completely*). An example item measuring the first dimension, i.e. reliance-based trust, is: "How willing are you to depend on your leader to back you up in difficult situations?" (item 5). When establishing the construct validity of the BTI for the South African context, Heyns and Rothmann (in press) encountered problems with item 10 of the disclosure-based scale, therefore this item was excluded from the second scale and only items 6-9 were used for the purpose of the current study. Heyns and Rothmann (in press) established configural, metric and scalar invariance for the specific items used in this research. An example item measuring the disclosure-based dimension is: "How willing are you to share your personal feelings with your leader?" (item 6). Previous research showed high reliability, ranging from 0.90 to 0.93 across samples, and correlated between 0.61 and 0.71 across the samples. Validation was tested in cross-validation samples and supported the construct validity, divergent validity and predictive validity of the BTI (Gillespie, 2003).

Items of the *Organisational Trust Instrument* (OTI; Mayer & Davis, 1999) were used to measure perceived trustworthiness of a direct leader (17 items) and propensity (6 items, excluding the reversed items on this scale). Each item requires respondents to answer on a scale ranging from 1 (*disagree strongly*) to 5 (*agree strongly*). An example item measuring propensity is: "Most experts tell the truth about the limits of their knowledge". Example items measuring ability, benevolence and integrity, respectively, are "I feel very confident about management's skills" (item 4), "My needs and desires are very important to management" (item 8) and "Sound principles seem to guide management's behaviour". During its initial

standardisation, all subscales obtained acceptable reliability coefficients ranging from 0.93 for ability and 0.95 for benevolence, to 0.96 for integrity (Mayer & Davis, 1999).

Data Analysis

The data analysis was carried out by means of Mplus version 7.3 (Muthén & Muthén, 1998-2014). The weighted least-squares with mean and variance adjustment (WLSMV) estimator was used to test the measurement and structural models. This estimator is robust; it does not assume normally distributed variables and it provides the best option for modelling categorical data (Brown, 2006). The following Mplus fit indices were used in this study: absolute fit indices, which included the Chi-square statistic (the test of absolute fit of the model), the weighted root mean square residual (WRMR) and the root means square error of approximation (RMSEA); incremental fit indices, which included the Tucker-Lewis Index (TLI); and the Comparative Fit Index (CFI) (Hair, Black, Babin & Andersen, 2010). The Comparative Fit Index (CFI) also compares the hypothesised and independent models, but takes sample size into account. The Tucker-Lewis Index (TLI) is a relative measure of covariation explained by the hypothesised model which has been specifically designed for the assessment of factor models. Critical values for good model fit have been recommended for the CFI and TLI to be acceptable above the 0.90 level (Wang & Wang, 2012), although Hu and Bentler (1999) recommended a cut-off value of 0.95. The RMSEA provides an indication of the overall amount of error in the hypothesised model-data fit, relative to the number of estimated parameters (complexity) in the model. The recommended acceptable levels of the RMSEA should be 0.05 or less and should not exceed 0.08. Hu and Bentler (1999) suggest a value of 0.06 to indicate acceptable fit. Chi-square difference tests were conducted to compare alternative nested structural models (Muthén & Muthén, 1998-2014).

Reliabilities (ρ) of scales measured by items rated on a continuous scale were computed using a formula based on the sum of squares of standardised loadings and the sum of standardised variance of error terms (Raykov, 2009; Wang & Wang, 2012). This was done as an alternative for Cronbach's alpha, which does not provide a dependable estimate of scale reliability when latent variable modelling is used.

To investigate the significance of hypotheses related to indirect effects, the procedure described by Hayes (2013) was used. Bootstrapping (with 10 000 samples) was used to construct two-sided bias-corrected 95% confidence intervals (CIs) so as to evaluate indirect effects.

Research Procedure

The study was cleared by the local university's ethics committee. Next, the purpose and objectives of the study were stipulated on a cover letter and attached to a questionnaire, which was distributed in hard copy format to the participants. The cover letter stated that participation is completely voluntary and anonymous and that information obtained would be used for research purposes only. The name and contact details of the researcher were indicated on the cover letter to allow participants an opportunity to clarify queries and to request feedback on the results of the study.

Results

Testing Measurement Models

The researchers tested a series of competing measurement models using confirmatory factor analyses (CFA) with Mplus to evaluate the distinctness of the measured variables. Four alternative models were considered.

The first model included three latent variables, namely a) propensity (measured by six observed variables), b) trustworthiness, consisting of three latent variables, namely ability (measured by six observed variables), benevolence (measured by five observed variables) and integrity (measured by six observed variables), and c) trust consisting of two latent variables, namely reliance (measured by five observed variables) and disclosure (measured by four observed variables). The measurement of propensity and trust remained the same in model 2 (as in model 1). However, trust was measured by nine observed variables. The third model tested whether the three latent constructs of ability, benevolence and trustworthiness were superfluous in the measurement of trustworthiness. The measurement of propensity and trust remained exactly as in model 1, while trustworthiness was measured by 17 directly observed indicators which did not differentiate between ability, benevolence and integrity as separate factors of the trustworthiness construct. The fourth model consisted of 32 observed variables which measured one latent variable. Table 1 presents the results of these analyses.

Table 1: Statistics for the Hypothesised Competing Measurement Models

Model	χ^2	df	TLI	CFI	RMSEA	WRMR
1	1439.58*	456	0.96	0.97	0.06* [0.056, 0.063]	1.43
2	2087.26	458	0.94	0.94	0.08* [0.073, 0.080]	1.82
3	1969.38	458	0.94	0.95	0.07* [0.071, 0.077]	1.73
4	6416.85	464	0.78	0.80	0.15* [0.140, 0.149]	3.38

* $p < 0.01$

χ^2 , chi-square statistic; *df*, degrees of freedom; TLI, Tucker-Lewis Index; CFI, Comparative Fit Index; RMSEA, root mean square error of approximation; WRMR, weighted root mean square residual

The first model reflects that the respondents differentiate each factor from the others as the theory proposes. Although the chi square value was statistically significant, model 1 provided a good fit to the data on three of the other four fit indices: $\chi^2 (N = 603) = 1439.58$, $df = 456$, $p < 0.001$; CFI = 0.97, TLI = 0.96, RMSEA = 0.05 (95% CI 0.056-0.063) and WRMR = 1.43. The results indicated that the relationship between each observed variable and its respective construct was statistically significant ($p < 0.01$), establishing the posited relationships among indicators and constructs (see Hair *et al.*, 2010).

The reliability and correlation coefficients of the scales are reported in Table 2.

Table 2: Descriptive Statistics, Reliabilities and Correlations of the Scales

Variable	Mean	SD	ρ	1	2	3	4	5
1. Propensity	2.84	0.66	0.70	-	-	-	-	-
2. Trustworthiness: Ability	3.65	0.81	0.89	0.29	-	-	-	-
3. Trustworthiness: Benevolence	3.09	0.97	0.91	0.32	0.78	-	-	-
4. Trustworthiness: Integrity	3.22	0.73	0.79	0.34	0.83	0.91	-	-
5. Trust: Reliance	4.81	1.42	0.89	0.18	0.56	0.61	0.64	-
6. Trust: Disclosure	4.36	1.55	0.86	0.17	0.52	0.57	0.61	0.67

All correlations are statistically significant: $p < 0.01$

Table 2 shows that the reliability coefficients of all the scales were acceptable ($\rho \geq 0.70$). Correlations between the trustworthiness subscales (i.e. ability, benevolence and integrity)

ranged from 0.78 to 0.91. Correlations of medium effect ($r \geq 0.30$, Cohen, 1988) were found between the subscales of trustworthiness and propensity. Correlations of small effect were found between propensity and the trust subscales. The effect sizes of correlations between dimensions of trustworthiness and trust were large ($r \geq 0.50$, Cohen, 1988).

Testing Structural Models

The structural model was tested by using latent variable modelling as implemented by Mplus, version 7.3 (Muthén & Muthén, 1998-2014). Results indicated a good fit of the re-estimated model to the data: $\chi^2 = 1439.58$, $df = 456$, $p < 0.001$; RMSEA = 0.06 (90% CI: 0.056, 0.063), CFI = 0.97, TLI = 0.96, and WRMR = 1.46. Two other competing models were also tested: Model 2 (a partial mediation model) included paths from propensity to trustworthiness, and from trustworthiness to trust. Model 3 (a direct effects model) included paths from propensity to trust and from trustworthiness to trust. The following changes in chi-square ($\Delta\chi^2$) were found: Models 1 and 2 – $\Delta\chi^2 = 2.65$, $\Delta df = 1$, $p < 0.1034$; models 1 and 3 – $\Delta\chi^2 = 53.39$, $\Delta df = 1$, $p < 0.0001$. Therefore model 1 was superior to models 2 and 3. Figure 2 and Table 3 show the standardised path coefficients estimated by Mplus for the first structural model.

Table 4: Standardised Regressing Coefficients of Trustworthiness and Propensity in Predicting Trust

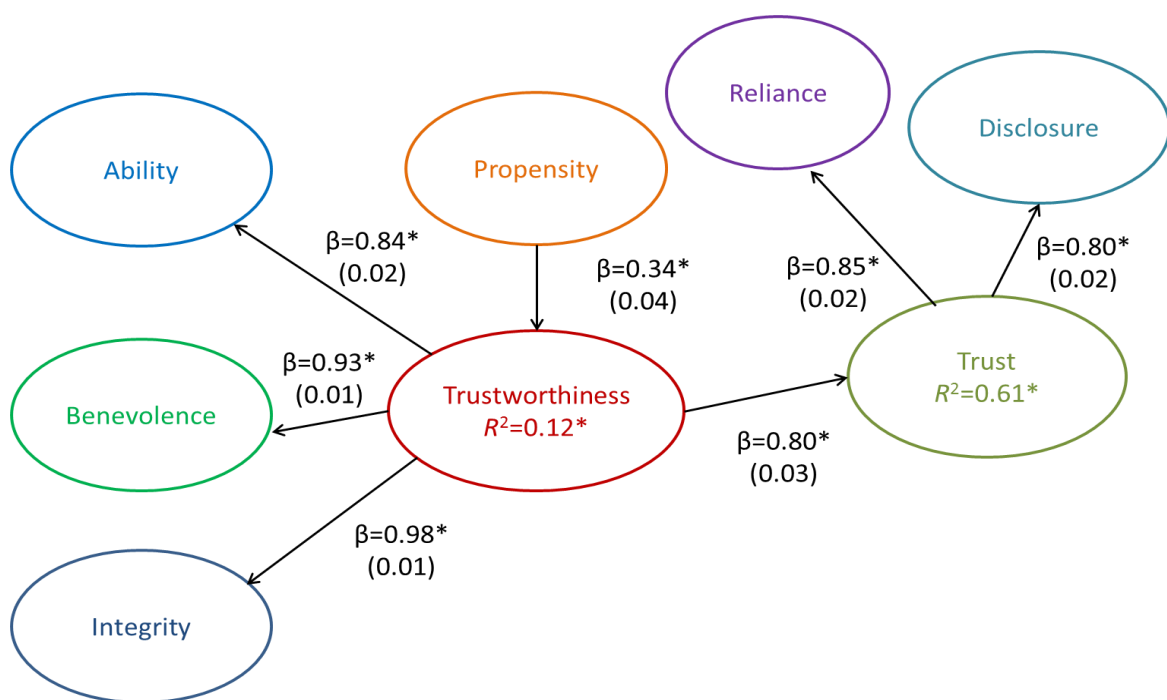
Variable	Estimate	SE	Est/SE	<i>p</i>
Trustworthiness				
Propensity	0.34	0.04	7.87	0.000**
Trust				
Propensity	-0.07	0.04	-1.65	0.103
Trustworthiness	0.80	0.03	28.90	0.000**

** $p < 0.01$; SE= Standard Error; Est/SE = Estimate to Standard Error Ratio

In model 3 (when the path of propensity to trustworthiness was fixed to zero), propensity had a direct effect on trust ($\beta = 0.20$, $p = 0.01$). The explained variances in the observed variables measuring propensity ranged from 0.16 to 0.37 and indicate that this scale could be improved. The results provide partial support for hypothesis 1, since a statistically significant effect of propensity on trustworthiness was observed ($\beta = 0.34$, $p < 0.01$).

Hypothesis 2, which stated that positive correlations exist between propensity and the two sub-dimensions of trust is also accepted, but although correlations were statistically significant, the effect sizes were small. As is evident from Table 3, propensity did not have a significant direct effect trust once trustworthiness was included in the model ($\beta = -0.07$, $p = 0.10$).

Table 3 furthermore shows that trust is predicted by the extent to which a trusting party perceives the trust target as trustworthy, as the path coefficient of trustworthiness was statistically significant and had the expected sign ($\beta = 0.80$, $p < 0.001$). The explained variances related to this portion of the model were substantial (ability, $R^2 = 0.67$; benevolence $R^2 = 0.87$, integrity $R^2 = 0.98$). Hypothesis 3, stating that all three trustworthiness beliefs are significantly and positively related to trust, was therefore supported. Therefore, a trusting party's willingness to trust is predicted by the extent to which the trust target is perceived as being trustworthy.



* $p < 0.001$

Figure 2. The structural model (standardised with standard errors in parentheses)

Indirect Effects

To determine whether the relationship between propensity and trust was indirectly affected by perceived trustworthiness, the procedure explained by Hayes (2013) was used. Bootstrapping was used to construct two-sided bias-corrected 95% and 99% CIs so as to evaluate the significance of indirect effects. The lower and upper CIs are reported in Table 4.

Table 4: Indirect Effect of Propensity on Trust

Variable	Estimate	S.E	95% CI	
			Lower	Upper
Trustworthiness	0.27*	0.04	0.18	0.36

$p < 0.01$

Table 4 shows that the indirect effect of propensity on trust ($\beta = 0.27$) is significant. Also the 95% confidence intervals [0.18, 0.36] did not include zero. Hypothesis 4 is supported. Therefore trustworthiness mediates the relation between propensity and trust. Individuals with a higher propensity to trust will tend to have more positive perceptions regarding the trust target's trustworthiness in terms of ability, benevolence and integrity characteristics which, in turn, will promote the development of trust/the willingness to actively engage in trusting behaviours.

Taken together, the results suggest that the relations posited in the model account for a substantial amount of the covariation in the data. The model accounts for 12% of the variance in trustworthiness and 61% of the variance in trust, lending more empirical support for the model's fit.

Discussion

This study examined the dynamic interplay between trust propensity, trustworthiness beliefs and trust within the context of dyadic workplace relationships. In support of the trust model developed by Mayer et al. (1995), results confirmed the distinctness of propensity, trustworthiness and trust as separate main constructs. Trust was strongly influenced by trustworthiness beliefs. Assessments of the trust referent's integrity and benevolence appeared to be leading considerations. In contrast, propensity had a moderate indirect effect on trust (via trustworthiness).

Regarding the trustworthiness construct specifically, particularly high inter-correlations were noted between the benevolence and integrity sub-scales and the overall trustworthiness construct. Although this seemed to suggest a lack of differentiation, the standardised estimated model parameters for the three latent factors in the current model were all significant. Moreover, the fit indices for the preferred model were superior to those for a model where the three factors were collapsed into one construct with 17 directly observed indicators of trustworthiness.

Integrity had the strongest effect on trust, followed by benevolence and ability, respectively. Propensity did not have an independent, direct impact on the decision to trust. This presents an interesting finding, since it implies that even if one has a consistent tendency to be willing to trust others across a broad spectrum of situations and targets, this disposition is only influential in impersonal situations and does not automatically imply willingness to trust within a specific relationship where the trust referent is known.

Analyses to determine indirect effects indicated that trustworthiness beliefs fully mediated the relation between propensity and trust, thereby confirming that propensity is no longer persuasive in the decision to trust once trustworthiness could be established. It is, however, clear that propensity indirectly affects trust via trustworthiness beliefs: The observed relation between propensity and trustworthiness implies that individuals with a natural predisposition to trust others will be more inclined to perceive a specific trust referent as able, benevolent and having integrity. Therefore, higher levels of propensity will facilitate higher levels of perceived trustworthiness, which, in turn, will facilitate trust.

Findings regarding the influence of trustworthiness on trust are in line with Mayer *et al.*'s (1995) model and subsequent research (Gill, Boies, Finegan, & McNally, 2005; Mayer & Gavin, 2005; Schoorman *et al.*, 2007) confirming a strong positive relation between trustworthiness beliefs and levels of trust. From a theoretical perspective, the observed correspondence between the benevolence and integrity constructs in our study is consistent with those found by previous researchers (Davis, Schoorman, Mayer, & Tan, 2000; Mayer & Gavin, 2005; Schoorman *et al.*, 2007) and provides further evidence of the intricate and idiosyncratic blend of the three trustworthiness factors, as initially outlined by Mayer *et al.* (1995). In congruence with the views of Dietz and Den Hartog (2006) regarding the conceptualisation of trustworthiness, the authors therefore believe that ability, benevolence and integrity may each be a significant consideration in itself, but are also likely to act interdependently and in idiosyncratic combinations that will be substantially influenced by context.

In line with Mayer *et al.*'s (1995) model and subsequent research (Gill *et al.*, 2005), the results of this study confirm that trustworthiness is a strong predictor of trust. Regarding the relative sequence of importance of the three trustworthiness components, previous research such as conducted by Davis *et al.* (2000) and Wasti and Tan (2012), for example, does not show equally significant relations to trust in all instances. Davis *et al.* (2000) confirmed a relation between all three components and trust, but regression analyses showed that these relations were only significant in the case of benevolence and integrity; they attributed this finding to likely effects of multicollinearity. Wasti and Tan (2012) followed a qualitative research approach to study the relative importance of trust antecedents within collectivist countries and found that, in terms of overall antecedent categories, integrity was mentioned most frequently, followed by ability and benevolence.

It is, however, important to note that dissimilar measures for trust were used in our study as compared to previous research that mostly relied on Mayer and Davis's trust measure (1999); therefore, comparisons between findings of the different studies need to be interpreted with caution. In fact, we are of the opinion that a meaningful comparison of this aspect to previous research requires that all contextual variables that might have influenced trust decisions within the various studies should be equitable. In support of this view, Sweeny (2010) for instance demonstrated that high-vulnerability contexts caused followers to re-prioritise the basis for trust in their leader.

With respect to the relation between trustworthiness beliefs and the decision to trust as conceptualised by a two-factor structure, Gillespie (2003) claimed that the reliance dimension is more ability-based and therefore relies on the cognitive assessments of the trust referent, in contrast to the disclosure dimension which is more relationship-oriented and taps into more intuitive and emotionally-driven motives to trust. She projected that beliefs about another's ability might be a stronger determinant of reliance-based trust, whereas assessments of benevolence would be a stronger determinant of disclosure-based trust. This study did not provide definitive support for these claims: While only a slightly stronger correspondence between ability beliefs and reliance-based trust was observed, the same could not be said of the relationship between perceived benevolence and disclosure-based trust.

Previous research regarding the effect of propensity on trust rendered mixed results (McKnight, 1998). This study indicated that propensity was not a strong predictor of trust, similar to findings of Mayer and Gavin (2005). In contrast, both Colquitt *et al.* (2007) and Searle *et al.* (2011) found that propensity remained important, even when trustworthiness

was considered simultaneously. Interestingly, research by Gill *et al.* (2005) established that an individual's disposition to trust correlated with intention to trust when information about trustworthiness was ambiguous, but did not correlate with intention to trust when information about trustworthiness was clear. It is possible that future studies could shed more light on these apparent conflicting findings by controlling for more specific contextual variables such as the duration or stage of the relationship, and/or the perceived level of risk.

The observed relation between propensity and trustworthiness resonates well with previous research suggesting that propensity could prejudice one's belief in the trustworthiness of others (Gill *et al.*, 2005; Kosugi & Yamagishi, 1998; McKnight *et al.*, 1998). Similar to the findings of McKnight *et al.* (1998), this implies that individuals with high levels of generalised trust in others would not only selectively attend to information congruent with their trust disposition, but would also interpret new material according to their natural tendency (McKnight *et al.* 1998).

This study contributes to the promotion of workplace trust relationships as follows: Results provide further empirical support for the theoretical trust model proposed by Mayer *et al.* (1995) as applied locally (i.e. outside the traditional first world countries), specifically with regard to the distinctness of propensity, trustworthiness and trust as separate main constructs of the model. The fact that propensity and trustworthiness beliefs of followers within the current sample group show relatively similar patterns than those previously established in other countries, seem to support the idea that followers, at least as far as their considerations for trusting leaders are concerned, may not be so different as one might be inclined to presume, after all.

In this study, the dimensionality of trust was investigated by combining a measure of trustworthiness (Mayer & Davis, 1999) with the measure of behavioural trust as developed by Gillespie (2003) within the same study. Since the latter serves as a closer proxy of actual trust than measures of trustworthiness (Gillespie, 2012; McEvily & Tortoriello, 2011), such a design enabled the researchers to obtain a more precise assessment of how trustworthiness beliefs might influence the decision to trust. Since results showed that all three trustworthiness beliefs predicted both reliance- and disclosure-based trust decisions directly, leaders should focus their effort and resources on advancing their integrity, benevolence and abilities as perceived by others. Findings revealed that higher levels of propensity will facilitate higher levels of perceived trustworthiness, therefore it seems worthwhile to explore ways and means in which generalised trust in others can be cultivated.

Because individual's perceptions were determined, self-report scales were used. We tried to curtail the effect of same-source bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) that is a disadvantage of this method, by clearly separating all the main constructs in the questionnaire and to add individualised instructions to each section, but we acknowledge that common method variance could still have influenced findings. Finally, the use of a cross-sectional survey design limits the generalizability of findings beyond the sample group.

Recommendations

Leaders should realise that their attitudes and behaviour have a decisive impact on trust formation processes – only if they are being perceived as trustworthy, followers will be likely to respond by engaging in trusting behaviours towards them. Tools to assess followers' perceptions of the trustworthiness of the leader may therefore provide useful feedback that can guide leaders in terms of their personal development plans.

Trustworthiness beliefs can be recognised as follows: Integrity, as the most dominant predictor of trust in this study, is often conceptually associated with fairness, consistency and promise fulfilment (Colquit *et al.*, 2007) as well as with accountability, justice and value congruence (Burke *et al.*, 2007). Previous research (Skarlicki & Latham, 2005) established that supervisors can be trained to adhere to justice principles. Leaders therefore need not strive to convey these behaviours merely intuitively, they can attend training courses to sensitize them to justice principles.

Behavioural indicators suggest that integrity is essentially judged by the extent to which the trust target adheres to sound moral and ethical principles (Colquitt *et al.*, 2007), especially when these are perceived to be similar to those of the trustor (Gilstrap & Collins, 2012). According to Gillespie and Mann (2004), sharing of common values promotes trusting behaviour because the leader is unlikely to act contrary to these values. This increases predictability and perceived risk and uncertainty are lowered as a result. It is therefore advised that leaders should take time to explain to followers what the values and beliefs are that guide their actions and to promote tolerance for different perspectives on this topic. In addition, they should ensure that the tangible policies, workplace procedures and recognition systems that are put in place are transparent and consistent with their views.

Benevolence beliefs can be promoted by showing genuine concern and commitment to the development of followers, by efforts to increase followers' self-esteem and by initiatives to nurture and leverage talent (Burke *et al.*, 2007; Caldwell & Dixon, 2009). Such goodwill

would also be exemplified by creating and sustaining supportive contexts, a consultative decision-making style, coaching and mentoring, and certain transformational and transactional behaviours (Burke *et al.*, 2007). Leaders can also attend specific leadership training and development programs to equip them with skills in consulting and involving members in important decisions (Gillespie & Mann, 2004).

Leaders who want to be perceived as competent, should advance their technical and management skills (Mayer & Davis, 1999). This implies that they should augment both the knowledge and skills to do a specific job (cognitive and physical capacities), as well as the interpersonal skills and general wisdom (emotional intelligence) needed to succeed in a workplace environment (Colquitt *et al.*, 2007; Colquitt *et al.*, 2011). Ability could also be promoted by setting compelling direction and creating enabling structures to promote effective task execution, disseminating relevant information and setting functional norms to help employees adapt to particular situations (Burke *et al.*, 2007), and by demonstrating that one is capable of delivering results (Tseng, Chen, & Chen, 2005).

Future studies exploring the relationship between propensity, trustworthiness and trust could improve the current knowledge base by controlling for more macro- and micro-level contextual effects that may affect the trust decision. Schoorman *et al.* (2007), for instance, believe that propensity is heavily influenced by personality, experiences and culture. Schoorman *et al.* (2007) suggest that cultural orientations could influence the relative importance assigned to ability, benevolence and integrity as conditions for trust: More action-oriented cultures possibly place more emphasis on ability as condition to trust, while more relationship-orientated cultures may be more prone to be guided by indicators of a trustee's benevolence. Costigan *et al.* (2007) furthermore indicated that collectivist cultures put a higher premium on relationship-based conditions for trust within dyadic workplace relationships than respondents from individualistic cultures.

Although the differentiation of propensity and trustworthiness perceptions in relation to trust decisions as perceived by specific demographic sub-groups such as race, gender and generational groupings fell beyond the scope of the current study for reasons explained earlier, it is acknowledged that several contextual factors not considered in this study may indeed also influence the trust formation process. In view of the fact that both individualistic and collectivistic cultures contribute to the diversity of the South African workplace for example, it makes sense that cultural background should be included as one particular variable that should be controlled for in future studies on this topic. Future research should specifically determine whether individuals from culturally diverse backgrounds would differ in

their respective levels of propensity and also whether they would differ in their relative preferences assigned to specific antecedents considered when making the decision to trust. It would however be necessary to control for the interaction effect of several variables such as a specific relationship's history, stage of development, and cues in the immediate setting (Rousseau *et al.*, 1998) within the same study as well.

By controlling for more contextual variables within studies, researchers can determine commonalities between contexts so that more meaningful comparisons across studies become possible. Since the disclosure-based dimension of trust is associated with an emotional, relationship-based form of trust (Gillespie, 2003), and as such is regarded as a more robust and resilient form of trust (McShane & Von Glinow, 2010), future studies should uncover which trustworthiness beliefs would best promote this dimension of trust. A qualitative research approach is probably the best way to do this; by doing so, researchers can help both leaders and their followers to fill the trust gap by a continued search for new pathways to build and repair trust between employees and their leaders.

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CHAPTER 4: RESEARCH ARTICLE 3

The Relationship between Volitional Trust, Psychological Need Satisfaction, Engagement and Turnover Intention

Manuscript 3, entitled “The Relationship between Volitional Trust, Psychological Need Satisfaction, Engagement and Turnover Intention”, will answer the following secondary research question: “What is the relationship between psychological need satisfaction, volitional trust (reliance and disclosure), engagement and turnover intention?”

Submitted for publication in Career Development International.

The Relationship between Volitional Trust, Psychological Need Satisfaction, Engagement and Turnover Intention

Abstract

This study tested a structural model that identifies the nature of relationships between trust, psychological needs satisfaction, work engagement and turnover intentions. A cross-sectional survey design with a convenience sample ($N=539$) was used. The Behavioural Trust Inventory, Work-related Basic Need Satisfaction Scale, Work Engagement Scale, and Turnover Intention Scale were administered. The results provided support for a model in which disclosure-based trust in a focal leader predicts satisfaction of self-determination needs and engagement. Mediation analyses revealed that satisfaction of the need for autonomy facilitates the influence of trust on work outcomes. More specifically, disclosure (a dimension of trust) impacted work engagement via autonomy satisfaction. Autonomy satisfaction can serve as a pathway to reduce intentions to quit. The findings provide possible directions for how leaders can leverage trust to facilitate autonomy support and higher levels of retention and engagement.

Key terms: Trust, psychological need satisfaction, autonomy, work engagement, intention to leave

As the 21st century unfolds, greater workforce mobility and severe skills shortages put increasing pressure on corporate leaders to find ways to retain top talent and to unlock their full potential. A study on global human capital trends in 2015 by Deloitte has confirmed that engagement and turnover have emerged as top issues that confront business leaders worldwide (Bersin, Agarwal, Peltser, & Schwartz, 2015). The loss of skilled workers due to global competition presents a primary challenge for South African managers (Rothmann, Diedericks, & Swart, 2013). It is also hard to find suitable replacements because South Africa is losing its top talent to other countries (Bothma & Roodt, 2013). Furthermore, those who enter the country in search of employment are less skilled (Kerr-Phillips & Thomas, 2009).

Research has established links between engagement and a range of attitudinal, behavioural, performance and financial outcomes (Albrecht, Bakker, Gruman, Macey, & Saks, 2015; Christian, Garza & Slaughter, 2011). Engagement is positively related to customer loyalty, productivity and profitability and inversely related to safety incidents, quality defects, merchandise shrinkage, absenteeism and turnover (Harter, Schmidt, Agrawal, & Plowman, 2013). Work engagement is considered to be of vital importance to increase productivity,

ensure organisational growth, sustainability (Gallup Report, 2013) and business success (Kahn, 2013). Building an engaged workforce has become an increasingly important concern for researchers, managers and practitioners (Chughtai & Buckley, 2013; Rothmann, 2014).

The focus of this research is twofold: Firstly, it intends to explore how the trust agent's trusting behaviours, as expressed towards a direct focal leader, may influence work engagement and turnover intentions. Various researchers assert that trust in top management, trust in a supervisor and alternative foci of trust each has differential effects on employee performance outcomes (Chughtai, 2010; Dirks & Ferrin, 2002). This exploration is confined to the direct leader as focus because it is trust in the direct leader that has the most powerful impact on employee behaviour (Chughtai, 2010; Dirks & Ferrin, 2002).

The current study specifically focuses on how the active expression of one's trust may influence engagement. Previous studies focused on how outcomes could be influenced as a result of trust in another, in other words beliefs regarding another person's character. Alternatively, studies used dissimilar foci as trust referents within the organisational context. The current research focus can therefore make a valuable contribution since previous research did not adequately distinguish between one's own versus another person's trust (Ferrin, Bligh, & Kohles, 2007).

Secondly, this research intends to refine our understanding of the underlying psychological processes and mechanisms through which trust impacts outcomes from a self-determination perspective, specifically concerning the role of psychological needs. Researchers and practitioners are interested in identifying and developing a better understanding of the processes through which trust impact outcomes within organisational contexts (Burke, Simms, Lazzara, & Salas, 2007; Gillespie & Mann, 2004). However, more research is needed to refine our understanding of the complex processes and mechanisms through which trust inspires individuals to perform, since these are not well understood (Dirks & Ferrin, 2002; Mayer & Gavin, 2005). It is also important that we develop a more in depth understanding of the effects that leaders have on their followers; more specifically, there is a need to develop more precise theories of the underlying psychological processes that transform leader efforts into follower action (Van Knippenberg, Van Knippenberg, De Cremer & Hogg, 2004).

No studies have as yet explored the specific psychological processes through which behavioural trust (also known as volitional trust) may inspire work engagement or discourage intentions to leave. Previous studies did not take into account how behavioural trust,

specifically, impacts the satisfaction of followers' self-determination needs and how this, in turn, could influence employees' engagement and turnover intentions. Furthermore, no research exists that have explored the link between the dimensions of behavioural trust, engagement, turnover intentions and satisfaction of self-determination needs within the same study.

A better understanding of the relationships between the mentioned variables firstly serves to further understanding of the underlying mechanisms that support engagement and retention. Secondly, it may reveal new pathways to enhance desirable organisational outcomes. Understanding the exact nature of these interrelationships could assist leaders in creating a work environment that could encourage valued employees not only to stay, but to be fully engaged in their work roles.

Trust

Trust is a complex concept that can be approached from the perspective of trust-as-a-belief, trust-as-an-intention/decision and trust-as-an-outcome (Dietz & Den Hartog, 2006; Gillespie, 2012). Trust beliefs are founded on the perceived trustworthiness of the trust target and are mostly derived from assessments of integrity, ability, benevolence, predictability, openness and loyalty (Dietz & Den Hartog, 2006; Hassan & Semerciöz, 2010) that serve as a basis for trust as it increases willingness to take risks within the relationship (Ferrin et al., 2007). Intentional- or behavioural trust reflects the volitional nature of trust-as-a-decision, at which point the individual decides whether or not to accept vulnerability towards a trustee despite the absence of guarantees that the other party will not violate that trust by acting opportunistically (Dietz & Den Hartog, 2006; Gillespie, 2012). McAllister has captured the volitional nature of trust by describing it as "the extent to which a person is confident in, and willing to act on the basis of, the words, actions, and decisions of another" (1995, p. 25). The outcomes of trust manifest in specific risk-taking behaviours within relationships (Mayer et al., 1995).

Trust should be differentiated from its antecedents and its outcomes (Dietz & Den Hartog, 2006; Hassan & Semerciöz, 2010; Gillespie, 2012; Mayer, Davis, & Schoorman, 1995; Schoorman, Mayer, & Davis, 2007). It is therefore important to be careful when comparing research findings that had been derived from trustworthiness beliefs as opposed to those derived from behavioural trust measures, for this may give rise to ambiguity. Trustworthiness is a quality the trustee has, whereas trust is something that the trustor does. The two concepts are related, but should not be mixed (Mayer et al., 1995; Lam, Loi, & Leong, 2013).

The core element of trust is the deliberate acceptance of vulnerability at the hand of a trustee (Dietz & Den Hartog, 2006; Gillespie, 2012; Mayer et al., 1995; Schoorman et al., 2007).

This study finds best alignment with the conceptualisation of trust as a decision which is made by the trust agent and specifically with Gillespie's (2003, 2012) operationalisation thereof in terms of reliance and disclosure. Gillespie differentiated two key forms of behavioural trust, namely reliance and disclosure (Gillespie, 2003, 2012), which are considered a valid operationalisation of the willingness to be vulnerable (Lam et al., 2013; Schoorman et al., 2007). Reliance refers to the trustor's willingness to accept the trustee's influence (Lam et al., 2013) and to depend on the trustee's competence. It is mostly based on professional and task considerations (Gillespie, 2003; Lee, Gillespie, Mann, & Wearing, 2010). Reliance reflects the extent to which the trusting party is willing to rely on the trusted party's decisions (Lam et al., 2013), judgements (Lee et al., 2010), professional knowledge, skills, abilities, technical expertise, advice, accuracy and quality of the trustee's work (Gillespie, 2003; 2012; Lee et al., 2010; Lam et al., 2013). According to Lam et al. (2013), subordinates demonstrate strong reliance when they follow their supervisor's directions wholeheartedly and express little doubt about the decisions that are made. Dependence on the supervisor's decisions and guidance causes vulnerability because subordinates may become subject to the supervisor's poor judgement.

Disclosure refers to the trustor's preparedness to share critical and sensitive information of either work-related or personal nature openly and honestly with the trustee (Gillespie, 2003, 2012; Lam et al., 2013; Lee et al., 2010). This form of trust is more personal and affective in nature and is strongly influenced by the quality of the relationship between the trusting parties (Gillespie, 2003; Lee et al., 2010). It involves the trustor's willingness to communicate personal insights, task-related knowledge, thoughts and beliefs, problems, concerns, feelings, hunches and emotional responses to work-related events with the trustee, including the willingness to admit mistakes and/or a lack of knowledge (Gillespie, 2003; Lam et al., 2013; Lee et al., 2010). The decision to disclose may lead to vulnerability because a supervisor may use this information to the subordinate's detriment, for example in performance appraisal and job promotion, or to cause humiliation by making sensitive and private information public (Lam et al., 2013).

Reliance and disclosure represent two separate but related domains of trust which represent different decisions to be vulnerable and which may lead to different consequences (Gillespie, 2003; Lam et al., 2013). A trusting party may for instance be willing to discuss personal

difficulties that affect the person's work with a sympathetic trustee, but be unwilling to depend on the trustee to represent his or her work to others or to complete a job on their behalf (Gillespie, 2003; Lam et al., 2013).

Other researchers stress that the intention to accept vulnerability towards a trust target can have both cognitive and affective foundations (McAllister, 1995; Priem & Weibel, 2012) and can be expressed in different ways. Cognitive forms of trust are derived from perceived competence and reliability of the trustee, while affect-based trust is founded on a more special and personal relationship characterised by (usually mutual) care and concern (McAllister, 1995). Mayer and Gavin (2005) have alternatively distinguished passive and active forms of trust expression: The readiness to share potentially harmful information with a trustee (such as to admit mistakes) is an example of an active way to accept vulnerability, whilst a passive form would be demonstrated by an employee's choice not to engage in self-protective actions (Mayer & Gavin, 2005). The differentiation between trust dimensions made by McAllister (1995) and Mayer and Gavin (2005) seem to correspond in some ways with those made by Gillespie (2003). This notion is supported by Lewicki, Tomlinson, and Gillespie (2006, p. 998), who state that "to trust behaviorally involves undertaking a course of risky action based on the confident expectation (cognitive basis) and feelings (emotional basis) that the other will honor trust. It is through such trusting behavior that one's 'willingness to be vulnerable to the actions of another party' (Mayer et al., 1995) is demonstrated."

Behavioural trust can be considered an intrinsically motivated behaviour which, in turn, supports autonomy because this form of trust considers both the trustor's identity-related needs and its influence on trust-related cognitions and choice (Priem & Weibel, 2012). Because trust is derived from a voluntary, personal choice to render oneself vulnerable to another person, it can be considered to be intrinsically motivated (Ferrin et al., 2007). Within the scope of this study, it is anticipated that behavioural trust influences not only the satisfaction of motivational needs, but also work engagement and intentions to quit. If this assumption proves to be true, a further question arises as to whether reliance and disclosure indeed have differential influences on outcomes as proposed by Gillespie (2003) and Lam et al. (2013), and in what respect its impact on the stated variables would differ.

Leadership, Trust and Outcomes

Trust is considered to be the variable with the strongest potential influence on interpersonal workplace behaviours (Ferrin et al., 2007) and is therefore essential to improve performance

(Gould-Williams, 2003). High trust facilitates a positive work climate, enhances the frequency, transparency and quality of communications (Chughtai, 2010; Ferrin et al., 2007; Mayer & Gavin, 2005) and promotes cooperative behaviours that ultimately advance collective organisational interests (Ferrin et al., 2007). Perhaps even more importantly, high trust tends to reduce the need for control-based monitoring systems (Covey, 2006; McAllister, 1995; Ferrin et al., 2007). In contrast, low trust creates a toxic work atmosphere characterised by conflict, self-protective activities and an increased need for bureaucratic managerial controls that reduce the speed of decision-making processes and increase production costs (Covey 2006).

Leaders can play a critical role in the creation of optimal working environments since they can significantly influence the attitudes and behaviour of their followers (Caldwell & Dixon, 2009; Soane, 2014). In fact, it is through followers' trust and respect for their leader that they are motivated to perform beyond expectations (Dirks & Ferrin, 2002; Gillespie & Mann, 2004; Sharkie, 2009). Dirks and Ferrin (2002) have confirmed that trust in leadership significantly influences behavioural and performance outcomes, job attitudes and intentions of employees. Their findings have been confirmed by a more recent comprehensive meta-analysis by Colquitt, Scott, and Lepine (2007). Trust relationships are furthermore difficult to imitate and is considered to be a valued socially complex resource that can provide organisations with a sustainable competitive advantage (Covey, 2006; Gould-Williams, 2003). The creation of trusting relationships between leaders and followers is consequently considered an essential leadership task (Ferrin et al., 2007).

Trust tends to be reciprocated within dyadic relationships (Ferrin et al., 2007). The more we trust others, the more likely they are to honour that trust by behaving in a trustworthy manner and to extend a similar level of trust to us (Ferrin et al., 2007; Lewicki et al., 2006). Burke et al. (2007) argue that leaders who engage in communication and share information with subordinates are likely to have subordinates who will reciprocate by communicating more regularly, openly and on a broad range of issues in turn. The opposite is also true (Ferrin et al., 2007): A perceived lack of trust in one party is likely to elicit mistrust towards the other party as a response. Moreover, trust, once violated, will not only have a spiralling negative effect in the sense that the individual would be inclined to withdraw cooperation thereafter, but it will also result in attempts of retribution, which may have more negative consequences than the case might be when there had been no trust to begin with.

Similarly, attempts to control another party may signal mistrust, which not only diminishes own trust on the receiving end, but also unleashes "an 'inflationary spiral' of increasingly

formalized relations between parties” as a result of monitoring behaviours that are reciprocated (Ferrin et al., 2007, p. 486). This presents leaders with an interesting dilemma, for traditional command and control strategies are readily implemented to gain cooperation, yet the decision to do so might actually reduce intrinsic motivation and trust even further (Ferrin et al., 2007). Ferrin et al. (2007) have explained that this is so because the simple awareness that one is being monitored may alter the trustor’s feelings about the dyadic relationship. Where positive expectations regarding the outcome of trust might have existed previously (even when this might have been based on the confidence that transgressions would be excused), these are now reassessed due to an increased likelihood that the person who exercises control may respond in an adverse manner towards the trustor. Expectations regarding a positive outcome of a trust decision in such instances are reassessed so that the risk of trusting the other party under these circumstances becomes undesirable.

Employees prefer working in organisations characterised by high trust (Gould-Williams, 2003). Trust in leadership, specifically, is likely to lead to the reduction of turnover intentions (Burke et al., 2007). A recent Kenexa High Performance Institute Work Trends Report (2011-2012) investigating the effect of trust in leaders on followers confirmed that those who distrust their leaders are about nine times more likely to consider leaving their organisation. Trusting workplace relationships, on the other hand, may reduce conflict, increase cooperation and organisational commitment and counter employees’ intentions to quit (Schlechter & Strauss, 2009). Intention to quit can be defined as an attitudinal orientation that reflects a conscious and deliberate readiness to leave the organisation (Marezciaux, Winne, & Sels, 2010). Because it is the most reliable indicator of subsequent turnover behaviour (Costigan, Insinga, Berman, Kranas, & Kureshov, 2012), it makes more sense to study the precursors of turnover in a pro-active manner, rather than studying actual voluntary turnover after the fact (Costigan et al., 2011, 2012).

Research has yet to explore the relationship between intention to quit and employees’ willingness to demonstrate vulnerability in terms of reliance and disclosure behaviours towards a direct leader. Would either reliance- or disclosure-based trust behaviour - or both - predict turnover intentions? We propose that there is an inverse relationship between high levels of behavioural trust and intention to leave.

Christian et al. (2011) have found tentative evidence that leadership is related to engagement and specifically recommended that an exploration of the role of trust would be beneficial to understanding this relationship more fully. Chughtai and Buckley (2008) add to

this that there is a need to provide additional empirical evidence of the relationship between high trust in an immediate supervisor and its impact on employees' engagement.

According to Kahn (1990), work engagement is an extension of one's authentic, preferred self to employment roles. This extension is evident from the fulfilling expression of the employee's physical, cognitive and emotional abilities in a work role in a way that promotes connections to work and to others. Kahn's (1990) need-satisfying approach to engagement accounts for the simultaneous employment of various aspects of the self in a work role and thereby allows for a better understanding of linkages between variables within this study. In Kahn's (1990) view, a person's engagement is strongly influenced on an intrinsic level by three psychological domains, namely, meaningfulness, safety, and availability. It is also affected by external forces such as interpersonal, intergroup and organisational factors that influence one's attitudes and behaviours. Kahn's (1990, p. 702) model regards engagement and disengagement as two opposite poles on a continuum where "people employ and express or withdraw and defend their preferred selves on the basis of their psychological experiences of self-in-role". Disengaged people feel the need to defend themselves and respond by uncoupling of the self from work roles – they become disconnected and "hide their true identity, thoughts and feelings during role performances" (Kahn, 1990, p. 702).

Rothmann (2014) shares the view that confidence and trust in supervisors and management are important drivers of work engagement across the globe. However, this relationship may be influenced by regional or national cultures. Leaders who trust their followers seem to be more readily prepared to empower them and to refrain from excessive monitoring that could demotivate followers or prevent them from being fully focused on their work (Engelbrecht, Heine, & Mahembe, 2014; Lin, 2010). Employees who trust their leaders are more willing to be vulnerable to the leader's actions, for they are confident that their rights and interests will not be harmed (Hassan & Ahmed, 2011). Trust makes individuals feel valued, psychologically safe and free to drive their physical, intellectual and emotional energies into role performance (Kahn, 1990). When trust within the dyadic relationship is lacking, on the other hand, productivity is hampered because leaders encounter difficulty with motivating and directing the attention of their followers away from self-protective activities towards relevant tasks (Mayer & Gavin, 2005).

Somewhat surprisingly, studies exploring the relationship between trust and work engagement are still uncommon (Chuchtai & Buckley, 2013). The few studies that have addressed this topic seemed to rely on trust beliefs as a proxy for trust. Such research

nevertheless indicated that employees who perceive their supervisors to be trustworthy, are also more likely to be fully engaged (Chughtai, 2010).

Drawing on Kahn's views on engagement and the theoretical distinction between the two main forms of behavioural trust as conceptualised by Gillespie (2012), this study argues that the employees' own willingness to engage in trusting behaviours play a substantial role in the employee's ability to perform. It proposes that employees who are willing to demonstrate reliance – in other words to depend on the judgement and professional skills of the leader – are more likely to succeed. This is because reliance opens possibilities to receive direction, guidance, and material as well as intangible support so that they are better able to align themselves with appropriate work goals and access the resources needed to effect a meaningful impact. Also, the willingness to express one's thoughts and feelings, opinions, assumptions and questions signals psychological presence in a role and should therefore have a positive impact on engagement.

Self-determination, Work Engagement and Turnover Intention

Although organisations desperately need employees to apply themselves fully to their job roles, such a total and passionate involvement cannot be demanded as it depends rather strongly on each employee's own discretionary effort and aspiration to invest personal psychological capabilities willingly (Frank, Finegan, & Taylor, 2004). It is therefore vital that leaders find effective ways to motivate the workforce in order to keep talented employees voluntarily and fully engaged in their work roles (Frank et al., 2004; Lin, 2010). We propose that self-determination theory (SDT) (Deci & Ryan, 2000) is the binding link between followers' trust in a direct focal leader and their optimal performance.

SDT is a macro-theory on human motivation (Deci & Ryan, 2008; 2014) that is gaining increasing prominence (Shuck et al, 2015; Gagné & Deci, 2005). It assumes that individuals are universally motivated by an innate desire for growth and integration (Deci & Ryan, 2000; Shuck et al., 2015). Central to this theory is the concept of autonomy, which concerns the degree to which behaviour is self-regulated (Ryan, Kuhl & Deci, 1997; Gagné & Deci, 2005).

SDT advocates that autonomous motivation can be enhanced by creating work environments that provide for the basic psychological needs for competence, autonomy and relatedness (Deci & Ryan, 2000, 2008). The need for autonomy conveys the desire to act with a sense of volition and choice, based on personal interest and to feel psychologically free (Gagne & Deci, 2005; Ryan & Deci, 2002) so that one can direct one's willpower in

accordance with one's own interests and values (Deci & Ryan, 2011; Meyer & Maltin, 2010). Ryan et al. (1997) have emphasised that autonomy should not be equated with independence or freedom from external pressures, but rather refer to "the holistic integrated functioning through which action is centrally regulated" (p. 706). Relatedness concerns the need to feel connected to significant others and to develop close and intimate relationships with them branded by mutual reliance, respect and caring (Deci & Ryan, 2000; Gilbert & Kelloway, 2014). High relatedness encompasses the feeling of being connected to something greater than oneself (Deci & Ryan, 2002). The need for competence involves a person's inherent desire to possess the knowledge, skills and resources to deal effectively with environmental requirements and challenges (Meyer & Maltin, 2010) and to influence important outcomes (Stone, Deci, & Ryan, 2009). Psychological need satisfaction (PNS) as proposed by SDT is regarded as essential for optimal human functioning (Deci & Ryan, 2014).

Although all three basic psychological needs are essential nutriments that drive intrinsic motivation and internalisation to secure growth and health (Gagné & Deci, 2005), autonomy, competence and relatedness may not have identical consequences (Deci & Ryan, 2000). Autonomy specifically plays a vital role in the social adaptation process because it helps individuals to selectively assimilate external social pressures in such a way that it ultimately supports self-regulation (Ryan et al., 1997). In other words, autonomy is considered a "critical developmental trajectory" (Ryan et al., 1997, p. 702) that helps individuals to have their other needs met and to act increasingly according to personally sanctioned values and intentions, that is, to be self-regulated.

Gagné and Deci (2005) have further detailed the motivational process as one where satisfaction of a person's needs for relatedness and competence promotes introjection, which is a moderately controlled form of motivation, but which does not guarantee that the resulting actions will be autonomous. Notably, it is only the degree to which the need for autonomy is satisfied while internalising the behaviour that determines whether identification (i.e. a moderately autonomous form of motivation) or introjection (i.e. the most autonomous form of extrinsic motivation) will occur.

Since satisfaction of the need for autonomy plays such an important role in the broad developmental process throughout life, it has a cascading effect on other important aspects of life. When autonomy is lacking, for example, people "cannot access the holistic knowledge necessary to identify what they need" (Ryan et al., 1997, p. 723). This consequently impairs not only their capacity for cognitive and emotional regulation and for the acquisition of social

competencies, but also their ability to identify appropriate goals and aims that promote optimal functioning and ultimate psychological health. Gagné and Deci (2005, p. 338) have therefore emphasised that “autonomy support is the most important social contextual factor for predicting identification and integration, and thus autonomous behaviour”. The three needs are supportive of each other in the motivational process, but it is satisfaction of the need for autonomy that becomes the distinguishing factor that determines if the value and regulation will become more fully internalized.

In contrast with other need theories that emphasise stable individual differences in the strength of inherent needs, SDT focuses on differences in opportunities to satisfy self-determination needs within social environments (Gagné & Deci, 2005; Deci & Ryan, 2014). The level of autonomous motivation that can be attained is negotiated through a dialectic process between individual differences that influence the interpretation of social context and the natural organismic integration process on the one hand, and work contexts that provide opportunities for need satisfaction on the other (Deci, Eghrari, Patrick, & Leone, 1994; Gagne & Deci, 2005). For example, even positive managerial efforts such as support, rewards and feedback may be subjectively experienced as offered in a controlling context and then tend to diminish rather than promote intrinsic motivation for that individual (Deci & Ryan, 2008).

Managerial methods (Gagné & Deci, 2005) and work context (Deci et al., 1994) can therefore influence not only the individual's intrinsic motivation, but also the extent to which full internalisation of extrinsic motivation will result (Gagné & Deci, 2005; Deci et al., 1994). More specifically, social climates that are subjectively experienced as pressuring and controlling undermine autonomous motivation, whereas supportive and informational climates enhance autonomous motivation (Deci & Ryan, 2008; Gagné & Deci, 2005).

When basic psychological needs are satisfied, individuals are intrinsically, in other words autonomously, motivated. Previous research confirms that autonomous motivation is positively associated with a range of desirable work outcomes, including enhanced persistence, performance, creativity, better productivity and less burnout, and higher levels of psychological well-being (Deci & Ryan, 2008; Gillet, Gagné, Sauvagre, & Fouquereau, 2013), whereas controlled motivation is linked to negative outcomes, including turnover intentions and emotional exhaustion (Gillet et al., 2013). Some studies have associated basic needs satisfaction with lower turnover (Gagné & Deci, 2005) and as instrumental in moving employees along the continuum to full engagement (Meyer, 2014).

Aim and Hypotheses

This study investigates the nature of the relationships between behavioural trust as expressed towards a direct leader, satisfaction of self-determination needs, work engagement and intentions to leave in an agribusiness in South Africa. In view of what has been said thus far, this study argues that behavioural trust is an intrinsically motivated intention based on a careful consideration of valued behaviours displayed by the trustee, which is then transformed into action through a deliberate choice to initiate or reciprocate trust. Trust is a self-regulated choice, and it can therefore be said that trusting behaviour prompts satisfaction of self-determination needs which, in turn, supports the individual to perform optimally. Specifically as far as PNS is concerned, an important theoretical point of departure of this research is that autonomy may be dominant when considering the interactions between independent and dependent variables in this study. The following relationships are proposed and tested:

- H1: Reliance-based trust relates negatively and statistically significantly to autonomy (H1a), negatively and statistically significantly to competence (H1b) and positively and statistically significantly to relatedness (H1c) satisfaction.
- H2: Disclosure-based trust relates positively and statistically significantly to autonomy (H2a), competence (H2b) and relatedness (H2c) satisfaction.
- H3: Reliance-based trust in a leader predicts engagement.
- H4: Disclosure-based trust in a leader predicts engagement.
- H5: Autonomy satisfaction predicts engagement.
- H6: There is a statistically significant inverse relationship between high levels of reliance-based trust and intentions to quit.
- H7: There is a statistically significant inverse relationship between high levels of disclosure-based trust and intentions to quit.
- H8: Autonomy satisfaction has a negative impact on turnover intentions.
- H9: Autonomy satisfaction mediates the relationship between trust (reliance H9a and disclose H9b) and engagement.
- H10: Autonomy satisfaction mediates the relationship between trust (reliance H10a and disclose H10b) and intention to quit.

Method

Participants

A convenience sample targeting participants of an agricultural business with a qualification of Grade 12 or higher ($N = 252$) was used in this research. The majority of the respondents were white (58.3%) males (46.7%) and corresponded well with the company's overall demographic profile. Most participants had Grade 12 as highest qualification (39.3%) or had either a diploma or a degree (39.7%). The job levels of the sample group ranged from non-managerial (32%) to supervisory (36.5%), middle level management (23.4%) and senior management (0.8%). A total of 7% were unsure of their job levels.

Measuring Instruments

Four measuring instruments, namely the Behavioural Trust Inventory (BTI; Gillespie, 2003), the Work-related Basic Need Satisfaction Scale (WBNSS; Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2010), the Work Engagement Scale (WES; May, Gilson, & Harter, 2004) and the Turnover Intention Scale (TIS; Sjöberg & Sverke, 2000) were used in the study.

Gillespie (2003) has devised the BTI to assess a person's trust behaviour within a relationship with a specified focal person and it significantly contributes to forecast key leadership outcomes to a better extent than alternative measures of trustworthiness (Gillespie, 2012). The BTI is a standardised instrument with a stable two-factor structure (Gillespie, 2003) that measures two distinct types of trusting behaviour, namely reliance (items 1-5) and disclosure (items 6-10) on a 7-point rating scale ranging from 1 (*not at all*) to 7 (*completely*). A high score on the reliance scale indicates confidence in the leader's professional skills. An example item is: "How willing are you to depend on your leader to back you up in difficult situations?" (reliance, item 4). The disclosure scale (items 6-10) was designed to measure trust at a more personal level (Lee et al., 2011) and gives an indication of the follower's willingness to disclose sensitive work or personal information to the leader. An example item is "How willing are you to discuss how you honestly feel about your work, even negative feelings and frustration?" Previous research reported Cronbach's alpha values well above 0.8 for both scales (Gillespie, 2003; Lee et al., 2010; Lam et al., 2013). Lam et al. (2013) have for example reported a Cronbach's alpha of .89 for the reliance scale and a value of .91 for the disclosure scale.

The WBNNS (Van den Broeck et al., 2010) assesses the satisfaction of psychological needs. The WBNSS used a 5-point Likert-type scale. A total of 18 items is used to tap into the respondent's personal experiences at work and distinguish between three basic psychological needs: the need for autonomy, competence and relatedness satisfaction. Each item offers options ranging from 1 (*totally disagree*) to 5 (*totally agree*). Examples of items are: "I feel free to do my job the way I think it could best be done" (autonomy); "I am good at the things I do in my job" (competence) and "At work, I feel part of a group" (relatedness). Studies within South African workplace contexts have confirmed that the scale has a stable three-factor structure and acceptable alpha coefficients of 0.81, 0.79 and 0.79 for the three respective scales (Rothmann et al., 2013).

The WES (May et al., 2004) was used to measure engagement. It is based on Kahn's (1990) conceptualisation of engagement and employs 12 items that measure cognitive elements (items 1-4; e.g. "I get so into my job that I lose track of time", item 1), emotional elements (items 5-8; e.g. "I am passionate about my job", item 5) and physical elements (items 9-12; e.g. "I am full of energy in my work", item 9) of engagement on a frequency scale varying from 1 (*almost never or never*) to 7 (*always or almost always*). In a South African context, Rothmann (2010) has found each component to have the following alpha coefficients: physical = 0.80; emotional = 0.82; and cognitive = 0.78.

Employees' intention to leave is measured by the TIS developed by Sjöberg and Sverke (2000). This three-item scale measures the strength of the respondent's intention to resign from their present position on a 5-point scale, where a high score reflects a strong intention to leave. An example of an item is "I am actively looking for other jobs". During initial standardisation of this scale an acceptable Cronbach's alpha coefficient of 0.83 was obtained (Sjöberg & Sverke, 2000) and a South African study obtained an alpha coefficient of 0.79 for the TIS (Rothmann et al., 2013).

Statistical Analysis

Structural equation modelling (SEM) methods as implemented in Mplus 7.31 (Muthén & Muthén, 1998-2014) were used to test the measurement and structural models. Items were defined as categorical and mean- and variance-adjusted weighted least-squares (WLSMV) were used as estimator. The following indices produced by Mplus were used to interpret data (Kline, 2010; Hair, Black, Babin, & Andersen, 2010; Wang & Wang, 2012): a) absolute fit indices, including the Chi-square statistic, which is the test of absolute fit of the model, and

the Root Mean Square Error of Approximation (RMSEA) as well as (b) approximate fit indexes, including the Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI).

Following the interpretation guidelines as stipulated by Wang and Wang (2012), a statistically significant Chi-square was interpreted as a rejection of the null hypothesis, implying imperfect model fit. Wang and Wang (2012) have nevertheless cautioned against the rejection of a model solely on the basis of a significant χ^2 value due to some explicit limitations of this fit index such as, for example, the fact that χ^2 is highly sensitive to sample size and violations of the assumption of multivariate normality. The χ^2 value also tends to increase when variables have highly skewed and kurtotic distributions and when the number of variables in a model increases (Wang & Wang, 2012). Therefore, additional fit indices as listed previously, were also considered. The authors regarded RMSEA values closer to 0 as preferable. However, values lower than 0.08 still indicate a fair fit. TLI and CFI values of 0.9 and above were considered acceptable, while values of 1.0 indicate the best fit.

Procedure

The study was cleared by the Ethics Committee of the Vaal Triangle Campus of the North-West University, South Africa (Ethics Approval Number: NWU-00014-14-A8). Permission was also obtained from the management of the target organisation to administer the questionnaire within the company. Each participant received a self-addressed envelope containing a cover letter and a hard copy of the questionnaire. The cover letter explained the purpose of the survey and emphasised that participation was completely voluntary. Confidentiality and anonymity were guaranteed and respondents were not required to reveal their names or identities. The survey questionnaire was designed in such a manner that, by participating, respondents gave consent that the researcher could use the information from the obtained survey for research purposes only. The name and contact details of the researcher were indicated on the cover letter to enable participants to clarify queries, should they have any. After completion of the questionnaires in their own time, respondents could either return the sealed envelopes to identified employees within the human resource management department or mail them directly to the researcher. The completed raw data were converted to an SPSS dataset for use in Mplus 7.31.

Results

Testing Measurement Models

Confirmatory factor analysis (CFA) with Mplus was used to delineate the most appropriate representation of the relationships among variables and its fit to the observed data. Four alternative measurement models were tested. The models focused on varying manifestations of the predictor variables (trust and PNS) as the primary focus of interest, while the emphasis on work engagement was on the overall construct rather than on potential sub-dimensions.

The first model included seven latent variables: Trust was considered similar to Gillespie's (2003) conceptualisation of behavioural trust, in other words consisting of two correlated but distinct constructs - reliance and disclosure - each of which was measured by a set of five observed indicators. PNS was specified to comprise three separate latent constructs - autonomy, competence and relatedness - that were measured by six observed variables each. Work engagement (measured by nine observed variables) and turnover intentions (measured by three observed indicators) were each specified as unidimensional latent constructs.

An alternative six-factor model was also considered. In this second model, trust was considered as a single latent construct (measured by ten observed variables), while the specification of PNS, work engagement and turnover intention remained the same as in the first model. The third model was similar to model one, with the exception of PNS, which was specified as a unidimensional latent construct, measured by eighteen observed variables. The final competing model considered all variables together as a single latent construct.

Table 1

Fit Statistics of Competing Measurement Models

Model	χ^2	<i>df</i>	TLI	CFI	RMSEA
1	1546.14	719	0.93	0.93	0.07
2	1942.03	725	0.89	0.90	0.08
3	1749.71	730	0.91	0.92	0.07
4	4911.55	740	0.64	0.66	0.15

χ^2 , chi-square statistic; *df*, degrees of freedom; TLI, Tucker-Lewis Index; CFI, Comparative Fit Index; RMSEA, root mean square error of approximation.

Comparison of the fit indices of the four competing models (see Table 1) identified Model 1 as the model that represents the best fit to the data: Results for this model showed a statistically significant ($p < 0.001$) χ^2 value of 1546.14 ($df = 719$), which was nevertheless smaller than the χ^2 values produced by any of the competing models. All the remaining fit indices of Model 1 indicated an acceptable fit to the data: CFI = 0.93, TLI = 0.93 and RMSEA = 0.07 (90% CI 0.06 – 0.07). This model also differentiates between the factors as the theory proposes and was therefore selected as the preferred model.

Although the overall fit of the preferred model was relatively good, the RMSEA value was not ideal. Post hoc analysis was conducted to fine-tune the hypothesised structure (Byrne, 2012). A review of the modification indices (MI) revealed some misfit in the model and suggested that model fit could be improved if error covariance between two items of the WES that both measure cognitive engagement, namely, item 1 (“I get so into my job that I lose track of time”) and item 2 (“I am very absorbed in my work”), were allowed – (MI = 74.09).

The revised model 1.1 compared to model 1 fitted the data better ($\Delta\chi^2 = 73.13$, $\Delta df = 1$, $p < 0.001$). It was nevertheless clear that the revised Model 1.1 could still be improved further by correlating the measurement errors (MI = 30.127) of two items on the WBNSS that assessed relatedness satisfaction, namely, the inversely phrased item 3 (“I don’t really mix with other people at my job”) and item 5 (“I often feel alone when I am with my colleagues”).

The re-specified model 1.2 showed a significant improvement in comparison to model 1.1; ($\Delta\chi^2 = 24.87$, $\Delta df = 1$, $p < 0.001$). In the revised model 1.2, two items on the BTI still showed a high MI-value of 22.17, which caused some concern. The two items were both indicators

for reliance-based trust (“Depend on your leader to handle and important issue on your behalf”, item 2, and “Rely on your leader to represent your work accurately to others”, item 3). When error covariance was allowed, the re-specified model resulted in a significant chi-square difference ($\Delta\chi^2 = 21.99$, $\Delta df = 1$, $p < 0.001$) and an excellent fit to the data: $\chi^2 = 1426.16$, $df = 716$; TLI = 0.94, CFI = 0.94, RMSEA = 0.06 (90% CI 0.06 - 0.07).

Items all loaded on their respective constructs as expected. The standardised regression coefficients were all statistically significant ($p < .001$), and varied from 0.31 to 0.93.

Testing the Structural Model

The correlation coefficients depicting relationships between main constructs are reported in Table 2 below. As expected, there was a strong correlation between reliance and disclose ($r = 0.62$) and autonomy was strongly supported by competence ($r = 0.63$) and relatedness ($r = 0.72$) satisfaction. Correlations between reliance and PNS were weak (values ranged between 0.09 to 0.28) whereas medium correlations between disclose and PNS were noted, with values ranging from 0.32 (competence, weakest) to 0.44 (autonomy, strongest). Autonomy was strongly correlated with both work engagement ($r = 0.66$) and intention to leave ($r = -0.65$), while weaker relationships were consistently noted for competence and relatedness in relation to these outcomes.

Table 2

Reliability and Correlations Matrix for the Latent Variables

	Variable	ρ	1	2	3	4	5
1	Reliance	0.87	-	-	-	-	-
2	Disclose	0.90	0.62*	-	-	-	-
3	Autonomy	0.68	0.28*	0.44*	-	-	-
4	Competence	0.77	0.17	0.33*	0.63*	-	-
5	Relatedness	0.68	0.09	0.34*	0.72*	0.74*	-
6	Engage	0.86	0.22*	0.41*	0.66*	0.45*	0.37*
7	Intention to leave	0.74	-0.19	-0.35*	-0.65*	-0.23*	-0.43*

Note: All values were significant at the $p < 0.05$ level; those who were also significant at the $p < 0.01$ level are marked ** (two-tailed).

The structural model was tested based on the measurement model. The hypothesised relationships were tested using latent variable modelling as implemented by Mplus, version 7.31 (Muthén & Muthén, 1998-2014).

The hypothesised model extracted the following fit statistics: $\chi^2 = 1426.16$, $df = 716$; $p < 0.001$; CFI = 0.94; TLI = 0.94; RMSEA = 0.06 (90% CI 0.06, 0.07). The chi-square test of model fit is not significant. The RMSEA value suggests a fair fit and the CFI/TLI values are well above the minimum stated criterion of 0.90. These results indicated that the overall model-to-data fit was acceptable.

Figure 1 and Table 3 show the standardised path coefficients estimated by Mplus for the structural model. Only statistically significant paths are displayed in the figure. The authors allowed correlations between reliance and disclosure as well as between autonomy, competence and relatedness satisfaction.

Table 5

Standardised Regression Coefficients of Basic Needs, Trust, Engagement and Turnover Intention

Variable	Estimate	SE	Est/SE	<i>p</i>
Autonomy on				
Reliance	0.01	0.09	0.12	0.902
Disclose	0.44	0.08	5.23	0.000**
Competence on				
Reliance	-0.05	0.09	-0.55	0.581
Disclose	0.36	0.08	4.33	0.000**
Relatedness on				
Reliance	-0.21	0.10	-2.21	0.03
Disclose	0.48	0.09	5.55	0.000**
Engagement on				
Reliance	-0.06	0.08	-0.83	0.41
Disclose	0.19	0.08	2.49	0.013
Autonomy	0.60	0.05	11.09	0.000**
Intention to Leave on				
Reliance	0.06	0.08	0.76	0.45
Disclose	-0.11	0.08	-1.38	0.17
Autonomy	-0.62	0.06	-9.97	0.000**

SE, standard error, Est/SE, estimate divided by standard error; *p*, obtained significance value.

** $p < 0.01$.

From Table 3 it is evident that reliance-based trust was not significantly related to PNS at the 99% level. Disclosure was positively and statistically significantly related to autonomy ($\beta = 0.44$, $p < 0.001$), competence ($\beta = 0.36$, $p < 0.001$) and relatedness ($\beta = 0.48$, $p < 0.01$). These findings indicate that Hypotheses H1a, H1b and H1c concerning reliance and its relationship to autonomy, competence and relatedness respectively, were not supported. In contrast, Hypotheses 2a, 2b and 2c concerning the willingness to disclose sensitive personal information to a direct leader and its relationship to PNS were all supported. The WRMR-estimated equation with respect to autonomy accounted for 20% of the variance in the model

($R^2 = 0.20$, $p < 0.01$). Competence accounted for only 11% of the variance ($R^2 = 0.11$, $p < 0.05$) and relatedness contributed 15% to the model ($R^2 = 0.15$, $p < 0.05$).

With respect to the engagement component of the model, the WLSMV-estimated equation accounted for a large proportion of the variance in engagement ($R^2 = 0.46$, $p < 0.01$). Regarding the impact of trust on engagement, Table 3 shows that the path coefficient of reliance ($\beta = -0.06$, $p > 0.05$) was not statistically significant. Hypothesis 3 is rejected. The path coefficient of disclose ($\beta = 0.19$, $p < 0.05$), on the other hand, was statistically significant and had the expected sign. Findings indicate that the willingness to rely on a direct leader did not have an impact on engagement, whereas the willingness to disclose sensitive/personal information to a direct leader had a positive effect on engagement. Hypothesis 4 is accepted. It is furthermore evident from Table 3 that autonomy ($\beta = 0.60$, $p < 0.01$) satisfaction predicts engagement. Hypothesis 5 is accepted.

For the portion of the model predicting turnover intention, Table 3 shows that trust did not predict turnover intention (reliance: $\beta = 0.06$, $p > 0.05$; disclose: $\beta = -0.11$, $p > 0.05$). Hypotheses 6 and 7 were not supported. Autonomy had a statistically significant negative relation with turnover intention ($\beta = -0.62$, $p < 0.01$). Hypothesis 8 was supported. The WLSMV-estimated equation accounted for 43% of the variance in turnover intention ($R^2 = 0.43$, $p < 0.01$).

Indirect Effects

In order to test whether autonomy satisfaction mediates any relationships between disclosure-based trust and engagement and turnover intentions respectively, indirect effects were assessed using a procedure proposed by Hayes (2013). Bootstrapping (10 000 samples) was used to construct two-sided bias-corrected confidence intervals (CIs) to assess potential indirect effects. The lower and upper CIs for the 99% level of certainty are reported in Table 4.

Table 4

Unstandardised Direct and Indirect Effects of Reliance- and Disclosure-Based Trust on Work Engagement and Intention to Leave via Autonomy Satisfaction

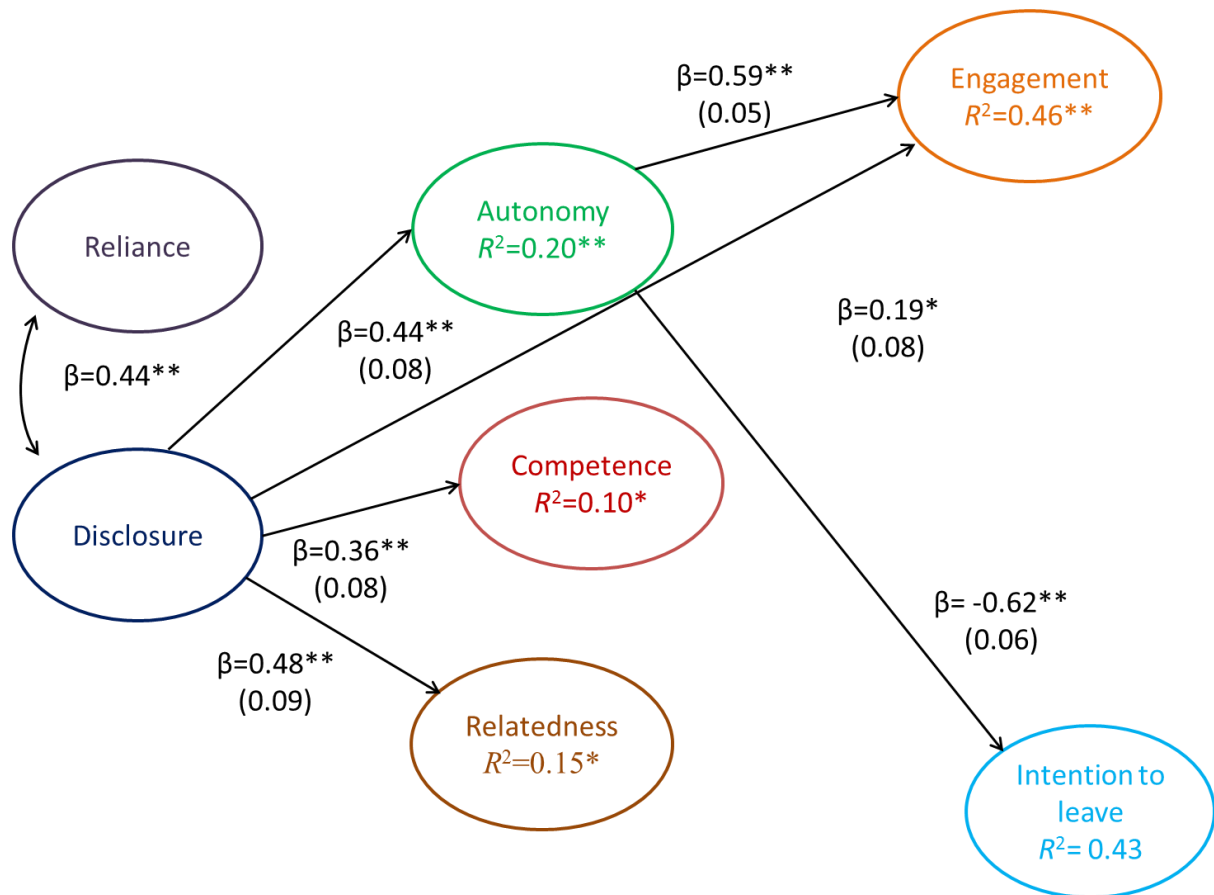
Variable	Estimate	SE	99% BC CI
Work engagement			
Disclose	0.076	0.04	[-0.01, 0.19]
Disclose (via autonomy satisfaction)	0.106*	0.04	[0.03, 0.23]
Reliance	-0.025	0.03	[-0.12, 0.07]
Reliance (via autonomy satisfaction)	0.003	0.03	[-0.08, 0.08]
Intention to leave			
Disclose	-0.101	0.09	[-0.35, 0.12]
Disclose (via autonomy satisfaction)	-0.245**	0.07	[-0.48, -0.09]
Reliance	0.053	0.08	[-0.18, 0.27]
Reliance (via autonomy satisfaction)	-0.006	0.06	[-0.17, 0.15]

Notes: ** $p \leq 0.001$; * $p \leq 0.05$; SE: standard error, BC CI: bias-corrected confidence interval

According to the results, neither engagement nor intention to quit were influenced by reliance in any significant way. These effects did not alter when autonomy was entered into the equation. Therefore, H9a and H10a were not supported.

A different picture evolved in the case of disclosure-based trust: Whereas it could not be said with absolute certainty that disclose would have a highly statistically significant direct effect on engagement (0.076, $p = 0.041$), its effect became more significant as soon as the influence of autonomy satisfaction was entered into the equation. For engagement, the indirect effect of disclose via autonomy was significant ($p = 0.008$) and explained 11% of the variance, while the total direct effect of disclose on engagement increased to 18% when autonomy was controlled ($p = 0.001$). It is therefore evident that autonomy satisfaction mediates the relationship between disclose and engagement, therefore H9b is supported.

Disclose had an insignificant direct influence on ITL, but this changed as well, as soon as the indirect effect of autonomy was considered. When the influence of autonomy was taken into account, the relationship became significant ($p = 0.001$) with autonomy explaining 25% of the variance and the total effect of disclose on ITL, explaining 35% of the variance. This means that autonomy fully mediates the relationship between disclose and intention to leave. Therefore H10b is accepted.



* $p < 0.05$; ** $p < 0.001$

Note: Correlations allowed between Autonomy and Competence ($r = 0.58$), Autonomy and Relatedness ($r = 0.69$), and Competence and Relatedness ($r = 0.71$)

Figure 1. The structural model (standardised solution with standard errors in parenthesis)

Discussion

The purpose of this study was to test a structural model that identifies the nature of relationships between trust, psychological needs satisfaction, work engagement and turnover intentions. The overall results provided support for a model in which disclosure-based trust in a focal leader not only predicts satisfaction of each of the self-determination needs (autonomy, competence and relatedness) at a 99% level of certainty, but it also had a significant impact on work engagement. Contrary to expectations, behavioural trust did not seem to have a statistically significant direct effect on intentions to leave.

As hypothesised, relatedness and competency were supportive of autonomy (effect sizes of correlations between both these two needs and autonomy were large), but only autonomy statistically significantly predicted both work engagement and turnover intentions. Mediation

analyses revealed that only disclosure-based trust – as opposed to reliance – influenced both work engagement and intentions to quit through autonomy satisfaction. This implies that satisfaction of the need for autonomy facilitates the influence of trust on work outcomes, so that the impact of disclosure on engagement becomes more powerful and that it can effectively serve as a pathway to reduce intentions to quit.

The current study contributes to the existing literature by furthering our understanding of the underlying processes through which behavioural trust influences engagement and intentions to quit. As such, it also serves to promote further model development and theory building regarding ways to enhance optimal functioning.

Findings of the current study highlight the differential impact of reliance- versus disclosure on outcomes and is consistent with the view that people choose to trust in some ways but not in others (Lam et al., 2013). More specifically, it provides further support for the theoretical assumption that reliance and disclosure represent two separate and different but related ways in which vulnerability can be expressed and which may lead to different consequences of such decisions (Gillespie, 2003; Lam et al., 2013). On a practical level, this may imply that a follower may be willing to volunteer personal insights regarding how work-related problems could alternatively be managed, but be unwilling to rely on his leader to represent those suggestions to others.

No previous research could be identified that specifically employed reliance and disclosure as indicators of trust in relation to the scope outlined for this study. Only one study, namely by Lam et al. (2013), could be identified that measured reliance- and disclosure-based trust, but this was done in relation to extra-role performance. Somewhat similar to the current study, Lam et al. (2013) found that only disclosure had a positive impact on extra-role performance, whereas reliance had no effect.

In addition to the findings reported by Lam et al. (2013) as mentioned, the differential impact of reliance versus disclosure in the current study seems to resonate well with conceptually related research (e.g. Edmonson, 2004; McAllister, 1995; Yang & Mossholder, 2010). The mentioned studies employed measures of cognitive- and affect-based trust within the same study and found that affect-based trust in the leader was more influential than cognitive-based trust in the accomplishment of desirable performance outcomes.

Overall, there seems to be a common denominator between previous research and findings of the current study regarding the instrumentality of socioemotional relations as a

motivational factor. It seems to support the notion that intense personal involvement as is implied by self-expressions (disclosure) will be more effective in the facilitation of outcomes than reliance, which requires a positive but more passive stance in terms of the extent of self-involvement required. After all, reliance emphasises followers' dependence on the leader's ability to provide back-up and support when necessary, but requires no particularly intense effort from the follower as such. Disclosure, on the other hand, demands active interaction between the parties. It typically involves self-expressions in the form of work-related thoughts, feelings, concerns and even opposing opinions being shared with the leader – in short, it requires a more extensive investment of the self. Building on Antonakis and Atwater's (2002) views that psychological and physical distance within dyadic relationships tend to diminish the leaders' influence because of reduced social interaction, it could be argued that reliance involves a more passive and psychologically impersonal type of trust relationship than its counterpart. Disclosure demands more intense social interaction and application of personal effort. It may therefore exercise a psychologically stronger impact on the employee's attitudes and behaviours that may be transferred to a higher level of personal engagement.

Specifically pertaining to disclosure, which is strongly relational and emotional in nature as was explained earlier, findings of the current study seem to be line with Dirks and Ferrin's (2002) argument that employees who experience a high level of affect-based trust within the relationship with their leader will reciprocate the perceived socio-emotional support with positive workplace behaviour and attitudes. Results for disclosure-based trust furthermore reiterate traditional views regarding the importance of open and honest communication and the necessity to maintain high quality relationships, especially in an era where the expansion of global activity requires an unsurpassed increase in personal interactions (Dervitsiotis, 2006). It also challenges those traditional views suggesting that leaders ought to keep employees at arms-length (Caldwell & Dixon, 2009) as it clearly suggests that leaders who are able to connect with employees at an interpersonally more intense and probably emotional level will be better able to create a motivational work environment in which satisfaction of work-related needs and work engagement will be enhanced.

The current study revealed a significant path coefficient between autonomy satisfaction and work engagement and therefore indicates that autonomy satisfaction significantly predicts work engagement. Previous research evidence linking autonomy and competence to intrinsic motivation is more abundant, relative to that supporting the impact of relatedness satisfaction. In this case, outcomes regarding the positive impact of autonomy-satisfaction (Alzyoud, Othman, & Mohd, 2014; Shuck et al., 2015; Silman, 2014) on work engagement is

supported by past research and underlines the likelihood that employees will be more fully engaged in their work if they have confidence in their capacity to perform optimally challenging tasks and if they experience a sense of control and freedom to exercise choice while doing so.

This study presents a first attempt to develop and test an integrated model that links behavioural trust to motivational needs, work engagement and intention to quit. It makes a valuable contribution in terms of the unique focus on the effect of self-expressed trusting behaviours on performance. It also offers useful insights into the underlying processes through which behavioural trust interact with basic motivational needs to impact engagement and intention to quit. Findings provide initial evidence that a follower's disclosure-based trusting behaviour towards a direct focal leader enriches the follower's opportunities to satisfy satisfaction of autonomy as the most influential basic need that predicts work engagement and intention to quit.

Although this study makes a valuable contribution by offering an integrative model for understanding interrelationships between behavioural trust, SDT, engagement and TI, certain study limitations should be considered in order to enhance the quality of future studies that aim to build on the current model. Different results might be obtained if a longitudinal study is conducted across several business sectors, instead of the current cross-sectional design that focused on a relatively small sample drawn from a single business source only. Although the present study is an initial step on this direction, further research is needed to unequivocally establish the causality and generalisability of findings to alternative types of business contexts and working relationships.

The reliance on self-report measurement instruments may also have caused self-report bias to influence results. This method to gather data was nevertheless considered essential due to the perceptual nature of the aspects that were studied. Moreover, previous research on the WBNSS in particular showed that participants' responses were not significantly affected by impression management (Van den Broeck et al., 2010). Future studies can nevertheless benefit from considering multiple sources of data, such as to include leaders' observations regarding followers' trusting behaviour and their level of work engagement in the study.

The model should furthermore not to be regarded as exhaustive, for there are other factors that may also affect the relationship between the stated variables. Since all variables in the model are dynamic and context-dependent to a large extent, more attention could be paid to controlling for contextual variables in future studies. The current study was for example

limited to the direct leader as focus for trust, while peer group relations may also exercise a considerable influence on the extent to which the work atmosphere is regarded as psychologically conducive to optimal performance. Even external factors might have constrained trusting behaviour. As a result, future research may consider including additional variables that may help to develop a complete understanding of the linkages between trust and performance-related outcomes.

Recommendations

The findings provide practical direction for how leaders can leverage trust to facilitate autonomy support and higher levels of retention and engagement. It is imperative that leaders realise that it is trust-building efforts rather than the reliance on traditional monitoring and control measures that promote autonomous functioning, in other words the intrinsic motivation to achieve performance goals. Insight into the functioning of the underlying elements of the proposed model helps leaders to focus on the critical aspects within the socio-emotional context that needs to be promoted or altered to sculpt an organisational climate within which employees feel trusted.

Leaders should specifically encourage employees to exchange ideas openly, honestly, freely and without fear of reproach or ridicule. When employees feel free to share what they truly think and feel about work related issues, it promotes independent thinking and the likelihood that they will take ownership of these ideas and choose to act upon these with a sense of volition and choice. In this way, the active expression of disclosure-based trusting behaviours supports autonomy, which is the most influential self-determination need that motivates work engagement and intentions to stay.

Leaders should actively create interactive work environments by extending opportunities for two-way communication and by putting in a concerted effort to understand followers' perspectives. The relationship should be open and honest enough so that there can be a meaningful two-way interaction process that can help the individual, by having the courage to express him/herself in a trusting way, to identify the factors that prevent satisfaction of motivational needs. It is important that leaders learn how to deal with potentially opposing views in a manner that does not breach trust. Even the appropriate expression of a follower's negative reactions and opposing opinions should be allowed, for this acknowledges the legitimacy of expressing one's true feelings and ultimately promotes the continued expression of trusting behaviour. Moreover, acknowledgement of dissenting views can help followers deal with external pressures in a way that is autonomy supportive because

acknowledgement helps individuals to internalise extrinsically motivated behaviours that may then become autonomously motivated.

Leaders should cherish relationships by being sensitive to how they interact with their followers and being aware of how their behaviour can inhibit or encourage follower's courage to disclose and contribute. Effective communication and particularly the ability to use supportive dialogue skilfully, is essential for building autonomous motivation. Stone et al. (2009) claim that some managers, in their experience, find it easier to rely on interactive styles that prevent, rather than support autonomous motivation. Consequently, the authors recommend official training to sensitise managers to the importance of supportive dialogue as a prerequisite for building autonomous motivation. Ways to build supportive dialogue include asking open questions that invite exploration of an important problem; employing active listening strategies to acknowledge employees' perspectives; providing sincere, positive feedback; rectifying problems in a factual, non-judgmental way; offering choices from a menu of possible actions to address a problem logically; limiting and streamline bureaucracy, and developing talent (Stone et al., 2009). Leaders can support autonomous motivation by explaining the rationale for tasks and by providing relevant information in a non-controlling manner (Stone et al., 2009). Autonomy is finally promoted by giving employees influence over their workplace through participative decision-making processes.

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CHAPTER 5

1.1 Introduction

The purpose of this chapter is to draw conclusions from the three research articles that form the basis for this study. The conclusions are discussed according to the main research objectives that formed the milestones for the study. Thereafter the limitations of the present enquiry are sketched. The chapter concludes with suggestions for future research in view of the overall findings. In what follows, the conclusions of the research are discussed first.

1.2 Research Questions Considered

This study aimed to develop and test a model of trust between leaders and followers within the setting of a South African workplace by examining the relationship between selected antecedents, mediators and outcomes. Three main objectives were formulated as stepping stones to achieve the primary aim; these relate to the three separate manuscripts in this study. Each of the three objectives were approached by formulating a number of secondary research questions. The specifics of this framework are summarised hereafter.

The first objective was to research the applicability of a suitable trust measurement instrument for a South African workplace setting. This was addressed in Manuscript 1 by investigating the measurement invariance of the Behavioral Trust Inventory (BTI) (Gillespie, 2003) for male and female managers. The following specific research questions were addressed: Can the BTI as measure of volitional trust be considered a reliable and valid measurement instrument with demonstrated measurement invariance across gender within a South African business context? Do males and females differ in terms of their average levels of trust as demonstrated in their willingness to render themselves vulnerable towards their direct leaders? Thirdly, if so, to what extent do these differences manifest in the sub-dimensions of trust, in other words in terms of their willingness to rely on and disclose information to their leaders?

Consistent with previous research conducted in Australia (Gillespie, 2003) and in Brazil (Zanini, Lusk. & Wolff, 2009), this study was able to replicate a proposed two-factor structure of the BTI consisting of Reliance and Disclosure. Measurement invariance by gender was computed and tested with the establishment of subsequent invariance constraints in the model parameters across groups. Configural, metric and partial scalar invariances of the two-factor model of the Behavioral Trust Inventory were confirmed across male and female

managers. One item that measures a person's willingness to share personal beliefs with a leader demonstrated a lack of scalar invariance for female managers. Results for this item should therefore be treated with caution. Finally, latent factor mean analyses revealed no significant differences between male and female managers on either of the trust scales.

The second aim was to examine the influence of two primary precursors of trust - trust propensity and trustworthiness beliefs - on the decision to trust, as was evidenced by reliance- and disclosure behaviours. This was done within dyadic workplace relationships where the follower was identified as the trusting party and the direct leader was considered to be the foci of trust. As explained in Manuscript 2, it was anticipated that a) trust propensity would be significantly and positively related to trustworthiness beliefs; b) trust propensity would be significantly and positively related to the reliance and disclosure dimensions of volitional trust; c) trustworthiness beliefs would predict trusting behaviour and d) that trustworthiness would mediate the relationship between trust propensity and volitional trust.

Results confirmed the distinctness of trust propensity, trustworthiness and trust as separate main constructs. Trust propensity had a statistically significant effect on trustworthiness, but did not have an independent, direct impact on the decision to trust. Trust was strongly associated with trustworthiness beliefs. Assessments of the trust referent's integrity and benevolence appeared to be leading considerations. Trustworthiness beliefs fully mediated the relationship between trust propensity and trust.

The third and final objective was to test a structural model that identifies the nature of relationships between behavioural trust, psychological needs satisfaction (PNS), work engagement and turnover intentions. This objective was divided into several sub-objectives in Manuscript 3, namely to:

- a-b) examine the nature of relationships between one's own reliance (a) and disclosure-based (b) trust and the satisfaction of vital psychological needs that drive intrinsic motivation to perform, namely autonomy, competence and relatedness;
- c-d) determine whether the two behavioural trust domains - reliance and disclosure - had a direct impact on engagement;
- e) examine the effect of basic PNS on work engagement;
- f-g) determine whether behavioural trust (reliance and disclosure) have a direct impact on turnover intent;
- h) examine the effect of basic PNS on turnover intent;
- i) establish whether PNS mediates the influence of trust on work engagement;

- j) establish whether PNS mediates the influence of trust on turnover intent.

Confirmatory factor analysis confirmed the distinctness of behavioural trust, PNS, engagement and turnover intention as separate main constructs. Results for sub-objectives 3a and b confirmed that disclosure-based trust predicted satisfaction of all three the essential psychological needs considered as essential nutrients for performance, growth and psychological health.

The next two sub-objectives provided insight into the direct effect of the predictor variables (trust and PNS) on work engagement. Results confirmed that disclosure had a direct effect on work engagement (sub-objective 3d) but this was not the case for reliance directly (sub-objective 3c). When considering PNS, it was clear that autonomy satisfaction statistically significantly predicted a reduction in intentions to quit (sub-objective 3e).

The next two sub-objectives assessed the effect of trust and PNS on intentions to quit. Results confirmed that neither reliance (3f) nor disclosure (3g) had a direct effect on intentions to quit. When considering PNS, autonomy satisfaction statistically significantly predicted a reduction in intentions to quit (sub-objective 3h).

The final research questions that remained to be answered are addressed by sub-objectives 3i and 3j. Mediation analyses confirmed that only disclose – as opposed to reliance – influenced work engagement indirectly via the mediating effect of autonomy satisfaction (sub-objective 3i). Autonomy satisfaction fully mediated the relationship between disclosure-based trust and intention to quit (sub-objective 3j).

In sum, the results for the main objective of Manuscript 3 provided support for a model in which disclosure-based trust in a focal leader firstly predicted satisfaction of each of the self-determination needs (autonomy, competency and relatedness). Furthermore, disclosure predicted work engagement directly and indirectly via the mediating influence of autonomy satisfaction. In addition, disclosure also predicted intention to quit via the indirect effect of autonomy satisfaction. When the influence of autonomy was taken into account, disclosure explained 18% of the total variance with respect to engagement and 35% of the total variance with respect to intention to leave.

1.3 Conclusions Emanating from the Study

In Manuscript 1, the researcher verified the applicability of the Behavioral Trust Inventory for a South African setting by assessing its measurement invariance across genders. After applying increasingly stringent measures, partial measurement invariance was demonstrated across groups and this led to the conclusion that the BTI can be considered a useful tool to assess interpersonal trust within a South African workplace setting. Subsequent latent factor mean analyses (after one potentially biased item had been deleted) furthermore indicated that males and females show similar levels of trust. It was therefore concluded that managers do not need to differentiate on the basis of gender when allocating their time, energy and resources to build and maintain trust within the workforce. Mean levels of trust were also found to be above average, which suggests that participants across genders are generally willing to demonstrate trust in their managers through actual risk-taking behaviour.

A final insight derived from results when mean scores of the sub-dimensions of trust were compared, is that participants are more likely to engage in trusting behaviours towards their leaders based on a professional or cognitive basis, rather than on an affective basis of trust. This finding is consistent with previous research trends (Gillespie, 2003) and provides support for claims (Gillespie, 2003) that people choose to trust in some ways (e.g. by being willing to rely on another's skills and abilities), but not in others (e.g. by being unwilling to share personal thoughts and feelings with the same trustee) and therefore offers further support for the two-factor structure for the BTI.

In Manuscript 2, the BTI was employed to gain a better understanding of the predictors of trust in relation to trust itself. Specifically, research questions focused on the extent to which one's natural trusting stance towards others in general, as well as specific beliefs regarding a known trust target, would interact to influence a person's willingness to engage in trusting behaviour. Results implied that trust propensity did not influence the decision to trust directly. Instead, the most influential consideration for an employee to engage in trusting behaviours seem to be derived from the perceived trustworthiness of the leader. All three characteristics that are commonly considered to be decisive in the assessment of trustworthiness were implied to be strong predictors of trusting behaviour: Integrity was interpreted to have the strongest effect, followed by benevolence and ability respectively. Results obtained from the mediation analysis further suggest that, even if one had a consistent tendency to be willing to trust others across a broad spectrum of situations and targets, this disposition would be only influential in impersonal situations and would no longer be persuasive once more information regarding the trustworthiness of the trust referent was established. Indications

that trust propensity nevertheless affected trust indirectly via trustworthiness beliefs, led to the additional conclusion that individuals with a higher trust propensity will also tend to perceive a specific trust referent as able, benevolent and having integrity which, in turn, will promote readiness to actively engage in trusting behaviours towards a trustee.

The integrative conclusion that can be derived from the objectives addressed in this manuscript is that trust is an interactive relational process in which the role of the leader in building trust should not be underestimated. This conclusion is supported by indications that it is not so much a follower's innate general trusting stance, but rather the leader's attitudes and behaviour towards followers that have a decisive impact on the trust formation process. Only if leaders are perceived as trustworthy, will followers be likely to respond by engaging in trusting behaviours towards them.

With more clarity regarding the impact of the precursors to trust in place, the focus of Manuscript 3 moved towards enlightenment of how behavioural trust impacts performance outcomes. Analyses of relationships between trust, psychological needs satisfaction, work engagement and turnover intentions firstly revealed a differential impact of reliance versus disclosure on outcomes. The overall results provided support for a model in which disclosure-based trust in a focal leader predicts satisfaction of each of the self-determination needs (autonomy, competence and relatedness). Disclosure-based trust, which is strongly relational and emotional in nature (Gillespie, 2003; Lee, Gillespie, Mann, & Wearing, 2010) also had a significant impact on work engagement, but had no direct impact on intentions to leave. It can therefore be concluded that it is meaningful to differentiate between the two domains of trust behaviour. Disclosure-based trust, which is strongly relational and more emotional and volitional in nature than reliance, can help to leverage the benefits of behavioural trust in a more specific and focused way.

Concerning the trusting party's role, findings for disclosure suggest that an employees' intense personal involvement as is implied by self-expressions (disclosure) will be more effective in the facilitation of outcomes than reliance, which requires a positive, but more passive stance in terms of the extent of self-involvement required. Concerning the trusted party's role, findings regarding the strong impact of disclosure suggest that leaders who are able to connect with employees at an interpersonally more intense and probably emotional level will be better able to create a motivational work environment in which satisfaction of work-related needs and work engagement will be enhanced.

The findings of this study furthermore highlight the vital role of autonomy satisfaction as an underlying mechanism that facilitate the link between trust and performance outcomes. In this respect, employees whose need for autonomy is recognized seem to be less inclined to leave. Consequently, leaders who are autonomy-supportive are likely to be more successful in retaining talented employees. Moreover, autonomy satisfaction also predicted work engagement. This underlines the likelihood that employees will be more fully engaged in their work if they have confidence in their capacity to perform challenging tasks optimally and if they experience a sense of control and freedom to exercise choice while doing so. Therefore, leaders who are autonomy-supportive are also likely to be more successful in motivating employees to be fully engaged in their work roles.

Finally, analyses of mediation effects (which revealed that only disclosure-based trust – as opposed to reliance – influences both work engagement and intentions to quit through autonomy satisfaction), led to the conclusion that satisfaction of the need for autonomy facilitates the influence of trust on work outcomes so that the impact of disclose on engagement becomes more powerful and that it can effectively serve as a pathway to reduce intentions to quit.

The integrated conclusion that can be derived from the objectives addressed in the third manuscript is that the trust-performance linkage can best be leveraged by creating work climates that encourage disclosure-based trust and create opportunities for the satisfaction of the need for autonomy. Employees who are more willing to take an active stance by offering their opinions and candidly discussing their personal thoughts, feelings and reactions to work-related events are more likely to engender opportunities for their psychological needs to be satisfied so that they may become autonomously motivated. It is particularly the satisfaction of the need for autonomy that prompts the confidence to act volitionally and which manifests in efforts to drive their physical, cognitive and emotional energies into their work roles.

1.4 Limitations

Although this study makes a valuable contribution by offering an integrated model for understanding interrelationships between behavioural trust, SDT, engagement and TI, certain important study limitations merit acknowledgement here to enhance the quality of future studies that aim to build on the current model.

First, the cross-sectional survey design used throughout this study allows for the identification of relationships between the independent and dependent variables at one point in time only. The convenience sampling technique that was consistently employed furthermore limits generalizability of results beyond the sample groups used in this study at this point in time. It is therefore acknowledged that applicability to a larger population and causal relationships between independent and dependent variables cannot be assumed beyond any doubt. Although the present study is an initial step in this direction, further research is needed to unequivocally establish causality and generalizability of findings to alternative types of business contexts and working relationships.

The use of self-report measurement instruments as primary method to gather data was considered essential due to the perceptual nature of the aspects that were studied, but may have caused inflated results due to same-source bias, as both independent and dependent variables were based on the participants' self-reports. Common method variance can be neutralised in future studies by considering multiple sources of data such as to include leaders' observations regarding followers' trusting behaviour and performance in addition to the followers' own perceptions.

1.5 Contributions Made by the Study

This study contributes to the existing trust literature by offering valuable insights into how trust within dyadic workplace relationships and its underlying supportive processes can be unlocked to retain and build a more engaged workforce. The unique contribution of this study emanates from various acumens: Firstly, it offers a suitable trust measurement instrument of which the reliability and construct equivalence has been verified so that it can be used with confidence within a South African workplace setting. Theoretically, this verification adds to the existing literature by offering results that show the applicability of the trust measure across a wider international database and thereby allows for wider context comparisons. The fact that partial measurement invariance has been demonstrated across gender groups also adds practical value as it indicates that the BTI can be considered a useful tool to assess interpersonal trust within a South African workplace setting.

Secondly, the study contributes by unpacking trust, which is a complex construct, in such a way that the role and influence of the various bases of trust can be construed more clearly. This knowledge enhances theoretical precision of the existing knowledge base. To illustrate, clarity regarding the way in which trust propensity and trustworthiness beliefs in others come to influence one's own trust behaviour offers a unique perspective on the interaction

between the various bases of trust. Also, the combination with generalized trust, trustworthiness and trust intentions within the same study, as well as the differentiation between reliance and disclosure to explore trust in relation to performance outcomes, provided novel insights that have thus far not been possible due to existing gaps in the current trust literature due to different bases of trust not previously being combined in this manner to explore these research objectives.

Perhaps even more importantly, differentiation between the different bases for trust adds to our practical understanding of how trust can be optimized in a more focused manner to effect performance outcomes that are not only personally important, but also crucial to the success of the organisation. On a practical level and from the leader perspective as the trusted party, this knowledge underlines the importance to nurture perceptions of trustworthiness and autonomy support, because these perceptions can substantially influence those employee behaviours that directly and indirectly impact important performance outcomes. From a follower's perspective, clarity regarding the differential influence of one's own trust behaviour directs followers' attention to the potential benefits if they are willing to disclose their own thoughts, feelings and reactions regarding work events despite the risk of these being ridiculed or rejected.

A leading contribution of this study is the development of a trust model that identifies the nature of relationships between trust, psychological needs satisfaction, work engagement and turnover intentions. The model is the first ever to demonstrate that one's own disclosure-based trust has a direct, significant impact on engagement. It furthermore provides novel insight into the links between volitional trust and specific underlying motivating mechanisms and how these influence performance. Specific contributions lie therein that it is specifically disclosure-based trust that predicts satisfaction of all three the basic needs that drive autonomous motivation and that it is through satisfaction of the need for autonomy as underlying mechanism that disclosure impacts both engagement and intentions to quit.

Taken together, current insights first and foremost confirm the profound influence that trust has on individual psychological processes and on individual and organisational-level performance. The results of this study suggest that dyadic relationships characterized by high trust generally serve to promote a positive work climate so that employees are able to focus on the tasks at hand rather than wasting it on self-protective activities that do not contribute directly to the achievement of organisational goals.

The study also confirmed that trust is an interactive, relational process. It is imperative that leaders understand the impact of their own behaviour on the trust formation process. This implies that leaders should be aware that employees' own trust behaviour cannot be promoted without minding the way in which they themselves behave towards their followers. For instance, when it becomes evident that followers have a need for more autonomy, leaders should understand that they can rectify this by becoming more sensitive to the way they respond to employee suggestions and attempts to participate, for their attitude may in effect neutralize their attempts to create opportunities for employees to act with volition and choice.

A final integrative conclusion is that it is critically important to recognize the vital role of employees' own trust behaviour in the trust-performance linkage. It is high levels of disclosure-based trust that particularly promotes intrinsic motivation and enable employees to function autonomously so that they can identify appropriate goals, act volitionally and drive their cognitive, physical and emotional energies into their work roles. The fact that it is specifically employees' own disclosure-based trust that strongly and directly influences satisfaction of essential motivational needs and higher levels of engagement, suggests that leaders should create a work environment that specifically supports autonomy satisfaction and opportunities to promote disclosure-based trust.

1.6 Recommendations

1.6.1 Recommendations to Solve the Research Problems

In answer to the need for a reliable trust measurement instrument that can be used to measure and monitor trust trends in the workplace, the BTI is recommended as a valid measure that can be employed to proactively identify potential breaches of trust and assist in the strategic planning process in terms of the appropriate allocation of resources.

The examination of the measurement invariance of the BTI on a larger sample is nevertheless recommended. Particularly, reasons for the observed response bias on item 10 as reported in Manuscript 1 should be explored in more depth, possibly by using a mixed-method approach. At this stage, results for Item 10 should be treated with caution, because it suggests that men and women use different conceptual frames of reference when considering the sharing of personal beliefs with their leaders. Deliberation on possible reasons for item bias in Manuscript 1 suggested sensitivity to the gender of the leader as a potentially complicating factor. Although the gender of the participant was controlled for in

this study, future studies may benefit by controlling for the gender of the trust target in addition to that of the trusting party, so that responses could be matched within paired dyads and to help us better understand the findings rendered by the administration of the BTI. Measurement errors could also be minimised further by accurate translation into the native languages of the respondents.

The results derived from the current study provide sufficient initial evidence that different bases for trust influence employee performance and work-related outcomes in significant, but different ways. Although managers can do little to improve the inclination of a follower to trust others in general (propensity), they should understand that individuals with a higher generalised trusting stance towards others will also tend to find it easier to perceive their leaders as trustworthy. Future studies can shed light on how this phenomenon can best be leveraged. It is, however, the leader's attitudes and behaviour that have a decisive impact on trust formation processes – only if leaders are being perceived as demonstrating integrity, benevolence and competence, will followers be willing to accept the risk of trusting them in return. Leaders should therefore focus their personal effort and resources on building these specific characteristics in order to encourage volitional trust. Integrity can be strengthened by concentrating on the development of sound moral and ethical principles, and to behave in a congruent, consistent and fair manner towards followers. This can be further strengthened by ensuring that the tangible policies, workplace procedures and recognition systems that are put in place are transparent and consistent with their views. Leaders can also attend training courses to help them improve their adherence to justice principles, for previous research showed that these can be supported by training (Skarlicki & Latham, 2005). Benevolence beliefs can be promoted by creating supportive work contexts (Burke, Simms, Lazzara, & Salas, 2007; Caldwell & Dixon, 2009, Gillespie & Mann, 2004). Perceived competence can be strengthened by setting compelling direction, creating enabling structures to promote effective task execution (Burke et al., 2007), delivering results (Tseng, Chen, & Chen, 2005), and by augmenting the knowledge and skills to do a specific job (cognitive and physical capacities), as well as the interpersonal skills and general wisdom (emotional intelligence) needed to succeed in a workplace environment (Colquitt, Scott, & LePine, 2007; Colquitt, Lepine, & Wesson, 2011).

In addition to the differential influence of the various antecedents of trust, leaders should also take cognisance of the varying impact of reliance versus disclosure-based trusting behaviours of followers on performance outcomes, as well as the important role of the underlying motivating mechanisms through which performance is facilitated. Leaders can capitalise on this knowledge by creating supportive work contexts that enhance meaningful

dialogue to promote both follower disclosure and autonomous motivation. Leaders should further note that suitable interactive styles require refined skills that can be developed by attending training courses intended for this purpose (Stone, Deci, & Ryan, 2009).

Perhaps even more crucial, is that leaders should learn to follow an integrated approach when they attempt to unlock the potential benefits of trust to obtain organisational sustainability and a strategic advantage to their competitors. This requires a comprehensive understanding of the role and function of each of the separate components of the trust model. This knowledge will help leaders to unlock the full potential that each element holds and to focus resources appropriately on the aspect of the trust-performance linkage that have to be strengthened. For example, when it becomes evident that followers do not perceive the leader to be particularly trustworthy, leaders can best rectify this by strengthening their ability to act with integrity, as this trustworthiness component has the strongest impact on employees' trust. Similarly, the extent to which disclosure-based trust can potentially influence intentions to leave largely depends on the way in which the leader supports autonomy.

1.6.2 Recommendations for Future Research

The percentage of explained variance in the observed variables measuring trust propensity indicate that this scale could still be improved upon. In addition, the observed overlapping of the integrity and benevolence constructs, together with inconsistent findings regarding the relative sequence of importance of the various trustworthiness beliefs in predicting trust, clearly points to a need for further exploration of this issue.

Future studies exploring the relationship between trust propensity, trustworthiness and trust could improve the current knowledge base by controlling for more macro- and micro-level contextual effects that may have an impact on the trust decision. Schoorman, Mayer, and Davis (2007), for instance, believe that propensity is heavily influenced by personality, experiences and culture. Schoorman et al. (2007) furthermore suggest that cultural orientations could influence the relative importance assigned to ability, benevolence and integrity as conditions for trust: More action-oriented cultures possibly place more emphasis on ability as a condition for trust, while more relationship-orientated cultures may be more prone to be guided by indicators of a trustee's benevolence. Costigan, Insinga, Berman, Kranas, and Kureshov (2012) furthermore indicate that collectivist cultures put a higher premium on relationship-based conditions for trust within dyadic workplace relationships than respondents from individualistic cultures.

Findings concerning the differential impact of different bases of trust suggest that there is value firstly in controlling for more variables that could potentially influence the trust formation process and secondly, in extending the trust model by including more outcome variables.

Future studies should take more contextual variables that could have influenced trust decisions within a particular setting into consideration. In the past, debates on trust have paid surprisingly little attention to the role of culture (Lyon, Möllering, & Saunders, 2012) and demographic differences (Lau, Lam, & Salamon, 2008). In view of this, it might be beneficial to extend trust research in general by using larger samples and controlling not only for gender, but also for age and race within the dyadic pairs to explore how these may change over time.

Since trust is dynamic and influenced by context as was outlined in this study, there are also several other factors, for example alternative foci of trust, that should be considered simultaneously within the same study to gain a better understanding of the interplay between these elements. Also, by controlling for more contextual variables such as the business sector or industry type, researchers can determine commonalities between contexts so that more meaningful comparisons across studies become possible.

As implied, the final trust model that resulted from this study is not exhaustive. A more complete understanding of the trust-performance linkage can be developed by including additional dependent variables such as, for example, flourishing and job embeddedness, and especially by research that aims to develop deeper insight into the role of underlying mechanisms that facilitate linkages, all of which may help to develop a more complete understanding of the trust-performance linkage.

In addition, it may be beneficial to identify the factors that contribute specifically to relatively high levels of trust as opposed to mere acceptable levels of trust so that this knowledge can be employed to further develop human capital as a strategic advantage. Since autonomy satisfaction evidently played a role in this respect, future studies might explore the influence of control mechanisms on trust and autonomous motivation more explicitly. Such research could, for example, address the question whether there is an optimal level of trust that can or should be realistically attained.

1.7 Final Conclusions

This study provided a sophisticated instrument through which trust trends can be measured and monitored, so that results can serve as input for decision making regarding the appropriate allocation of resources. It confirmed the interactive nature of trust by providing both the trustor and the trusted party with guidelines in terms of what has to be done to strengthen the trust relationship and the continued reciprocation of trust so that the benefits of trust can be unlocked over an extended period. Finally, it provided valuable information about how and through which underlying mechanisms volitional trust comes to influence specific outcomes. In view of the findings, it is fair to say that this study added both theoretical and practical value as it revealed explicit pathways through which the benefits of trust can be unlocked in a more specific and meaningful way to attain strategic advantage.

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