The relationship amongst behavioural integrity, trust and innovative work behaviour

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Abstract

With an ever changing and complex business environment within which organisations must compete, innovation through innovative work behaviour is necessary for firm survival. Behavioural integrity is a key attribute required by employees, especially managers who lead teams, in that behavioural integrity can have an effect on important organisational outcomes. Trust is closely related to vulnerability and risk-taking and is a known facilitator to many organisational behaviour outcomes. As such, behavioural integrity, trust and innovative work behaviour formed part of the research to examine a new dimension in the theory on behavioural integrity. This has value in giving organisations a practical understanding of what can be done by leaders to influence innovative work behaviour of employees.

This descriptive research, using a quantitative approach through a survey of 118 technology focused employees, was based on a self-administered survey. The research shows that behavioural integrity of the manager has a positive predictive effect on employee trust. Moreover, the research did not support the notion that employee trust predicts employee innovative work behaviour as well as the idea that behavioural integrity of managers predicts innovative work behaviour in employees.

Keywords

Behavioural integrity, trust, innovative work behaviour

Declaration

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

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1. Introduction to the research problem

1.1. Introduction

There has been numerous leadership scandals recently (Wells Fargo, Volkswagen, Steinhoff and FIFA are a few examples) which have led to loss in trust in the leaders and therefore behavioural integrity of managers are becoming ever more important. This is all whilst competing in a complex business environment where innovation is critical to gaining a competitive advantage (Teece, Peteraf, & Leih, 2016; Wang & Dass, 2017). The objective of this study is to add to the existing knowledge on behavioural integrity by determining what is the nature of the relationship amongst behavioural integrity of managers, trust of employees and the still developing construct of innovative work behaviour in employees.

"Do as I say, not as I do" is an apt approach to introduce behavioural integrity as it is the perceived word to deed alignment of a person being observed (Simons, 2002). Innovative work behaviour can be described as being the "the intentional creation, introduction and application of new ideas within a work role, group or organisation, in order to benefit role performance, the group, or the organisation" (Janssen, 2000). For this study, Mayer, Davis and Schoorman's (1995) definition of trust, the "willingness 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", is most appropriate.

1.2. Background to the research problem

Porter and Van der Linde (1995) state that business success does not reside in a company optimising their current systems but rather on their innovation capability. Following on, change is necessary to ensure business sustainability (Manso, 2017). There are many deterrents to the innovative capacity of employees and with the main concerns being perceived work-related issues, industry trends or transformation (Schuh, Zhang, Morgeson, Tian, & van Dick, 2018). It is universally understood that employee innovation is fundamental for organisational sustainability and success (Lukes & Stephan, 2017; Schuh et al., 2018).

Leaders are recognising the importance of innovation and in a KPMG report titled “Now or never: CEOs mobilize for the fourth industrial revolution” (Doughtie, 2016), CEO’s state that fostering innovation is their top strategic priority. This sentiment is reinforced in the PWC 20th CEO survey (Swanick, Drayton, & Bello Valcarce, 2017) in which CEO’s rated innovation as the area they wanted to strengthen to capitalise on new opportunities. There is a need to enhance the creative and innovative abilities of employees, thereby increasing organisational success (Hornsby, Kuratko, & Montagno, 1999).

Although the need for innovation is well understood, it is not easy to make it an incorporate it as part of an organisation’s embedded business system (Manso, 2017). Janssen (2000) explains that workers are mandated to perform prescribed tasks for their role in order to address their key performance indicators and they are seldom required to achieve innovative work behaviours. Innovative work behaviour generally entails challenging the status quo however when employees use resources as well as time on initiatives not stipulated in their key performance indicators, their manager’s may not comprehend or be willing to support what they are trying to achieve (Schuh et al., 2018). Carnevale, Huang, Crede, Harms and Uhl-Bien (2017) have found that leaders are form a pivotal part in motivating employee innovative behaviour and hence there should be a concerted effort to from leaders to help employees be more innovative.

From an employee perspective, a high leader member exchanger relationship is also advantageous. Idea promotion forms one part of the innovation process and good quality leader member exchange interactions with managers may assist with this stage to get buy-in and momentum into an idea. The success of an employee’s innovation efforts is predominantly influenced by the individual’s networks within the organisation, because it is these connections that help to support the employee’s innovative efforts by providing the required resources, freedom and organisational power to promote and execute these new ideas (Wang, Fang, Qureshi, & Janssen, 2015). Schuh et al. (2018) also prove that personnel who engage in pioneering new ideas receive more favourable performance appraisals with an increased level of leader member exchange.

The business world’s most prosperous and innovative organisations are known for encouraging experimentation and risk-taking (Manso, 2017). Manso (2011) state that a large proportion of studies around innovation show a poor success rate of new innovative

efforts. This indicates that if corporate leaders want to encourage innovation, they should create a culture that tolerates failure (Manso, 2017) and encourages risk taking (Schoorman, Mayer, & Davis, 2007). Neves and Eisenberger (2013) conclude that trust enables an employee to take on risk taking behaviour on behalf of the organisation.

Trust has been widely recognised as a central antecedent or outcome of organisational studies (Simons, 2002). Willingness to engage in risk taking is closely associated with trust in managers (Mayer et al., 1995). These exploratory behaviours supports the development of high quality manager and employee interaction (Chen, Lam, & An Zhong, 2010). Loss of trust also reduces the risk taking behaviour of employees (Mayer et al., 1995) and consequently can reduce the employee's propensity to innovate (Amabile & Pratt, 2006).

Meta-analyses have positively linked trust and behavioural integrity to task performance, citizenship behaviour (Colquitt & Rodel, 2011), as well as job satisfaction and organisational commitment (Frazier, Tupper, & Fainshmidt, 2016). As the business world evolves to become fast paced and uncertain, team-work and collaboration are increasingly touted for successful and proficient crucial organisational processes, trust will remain a prominent consideration in organisational contexts (Frazier et al., 2016).

Simons (2002) states that there is significant consensus with regards to perceptions that when one's words tends to be in line with their actions, it a basis for the cultivation of trust. When there is word to deed misalignment or hypocrisy, this renders the leaders future behaviour as unpredictable and increases the employee's discomfort (Greenbaum, Mawritz, & Piccolo, 2015) which can reduce trust in the leader.

Frazier et al. (2016) have established that integrity contributes to a high trust relationship with the supervisor. Behavioural integrity forms a fundamental antecedent to trust that can explain outcomes of a broader collection of organisational behaviours than psychological contracts. The importance of understanding the nature of behavioural integrity is supported by research from Simons, Leroy, Collewaert and Masschelein (2015) where they explained that supervisor's behavioural integrity has a larger effect on commitment and organisational citizenship behaviour as compared to a psychological contract. Furthermore, behavioural integrity has been linked to other negative effects such as poor health and stress (Prottas, 2008). It is critical for leaders to 'walk the talk' as a failure in this can manifest in a loss of

trust in leadership as well as higher levels of depression and intention to turnover in employees (Greenbaum et al., 2015).

From the literature review conducted, no evidence of the relationship amongst behavioural integrity and innovative work behaviour existed. However studies regarding the mediating effect of trust between behavioural integrity and employee performance, intent to stay, organisational citizenship behaviour, and discretionary effort (Kannan-Narasimhan & Lawrence, 2012; Simons, 2002) was found and hence a mediating relationship of trust was mentioned as part of the research.

Kramer (1999) states that trust leads to a party leaving themselves exposed to risk that is derived from the party's questioning about the objectives, intent and probable actions of others on whom they depend. The uncertainty of the individual can be reduced by the perception of the managers' word to deed alignment or behavioural integrity (Simons, 2002). Given the importance of behavioural integrity, trust and innovative work behaviour, can managers use these constructs together to give their organisations a competitive advantage?

1.3. Research objectives

The foremost research intention of this report is to develop an understanding the relationship amongst behavioural integrity, trust and innovative work behaviour.

The following sub-objectives are used to support the main research objective.

1. To establish if behavioural integrity of managers positively predicts employees trust.
2. To establish if employees trust positively predicts innovative work behaviour of employees.
3. To establish if behavioural integrity of managers positively predicts and innovative work behaviour of employees

1.4. Potential contribution to literature

Hinkin and Schriesheim (2015) state that behavioural integrity is a somewhat uncultivated paradigm that has significant impacts with regards to key organisational outcomes and as such, it warrants extra consideration. Along with this, trust has been widely recognised as

a central antecedent or outcome of organisational studies (Simons, 2002). Past studies that have concentrated on behavioural integrity of managers and employee outcomes concerned with consequences such as in-role performance, affective commitment, intention to turnover, organisational citizenship behaviour, stress, employee attitudes and well-being (Prottas, 2008; Simons, 2002; Simons, Leroy, Collewaert, & Masschelein, 2015) however none have expounded on employee innovative work behaviour and this research aims to expand on the existing academic knowledge on behavioural integrity by concentrating on the unexplored outcomes of the relationship amongst behavioural integrity, trust and innovative work behaviour.

1.5. Potential contribution to business

Whilst the importance of innovation is noted, it is stated that it is not easy to make it part of an organisation's business practices or DNA (Manso, 2017). The practical implications of this research could potentially contribute to the business environment in that behavioural integrity could be considered as a key antecedent in order to drive employee innovation within a team as the employees can predict the response of the manager to their innovative behaviour be it good or bad. Furthermore, with recent failures in leadership that has come to light, behavioural integrity is paramount to lead in an organisation and it is important for managers to understand if behavioural integrity can also contribute to their competitive advantage through innovation.

1.6. Conclusion

This chapter frames the reasoning for the research into the relationship amongst behavioural integrity, trust and innovative work behaviour. The prominence of exploiting a competitive advantage through innovation was presented along with the need to have an understanding of how to affect innovative work behaviour was argued. A requisite of behavioural integrity was discussed and contended due to the numerous leadership scandals that have occurred recently. The inclusion of the importance of trust in the study was also discussed.

The scope of this study was restricted to the technology divisions in a large South African multinational company as innovative work behaviour and innovation was included in their business unit values. This is not to imply that innovation is not present in any other role or

industry and it is critical to put emphasis on the fact that the outcomes of this paper may not be generally applied universally. There are numerous contributing factors to innovation and no comprehensive deductions should be made from this research.

The constructs of behavioural integrity, trust and innovative work behaviour are presented in the next chapter. Thereafter, research objectives and hypotheses are presented in chapter 3. Chapter 4 discusses the logic and methodology used during the research and subsequently the results of these analyses are published in chapter 5. The study concludes with a discussion around these observations (chapter 6) along with the conclusion in chapter 7.

2. Literature review

2.1. Introduction

This purpose of chapter 2 is to expand on the constructs of behavioural integrity, trust and innovative work behaviour and the research is based in the domain of organisational behaviour specifically related to leader member exchange theory. Firstly, definitions of behavioural integrity, trust and innovative work behaviour were reviewed, followed by their theoretical positioning of each of the constructs which was done by reviewing quality journals articles. This was followed by assessing what was available and what was not available in literature regarding the relationships between the constructs. The chapter was closed off by briefly discussing other important factors that may affect behavioural integrity, trust and / or innovative work behaviour.

2.2. Behavioural integrity

2.2.1. Definition

With multiple leadership scandals of late (Wells Fargo, Volkswagen, Steinhoff, FIFA), it is ever more critical to enhance leader integrity within the organisation (Palanski, Cullen, Gentry, & Nichols, 2015; Simons et al., 2015). In any form of leadership (authentic, transformational, ethical and spiritual), integrity is an important aspect (Mayer, Kuenzi, Greenbaum, Bardes, & Salvador, 2009). Integrity has been mentioned as a normative ideal and Palanski and Yammarino (2007) took upon themselves to define integrity. From their study of over thirty articles, they had broken down integrity into five main categories: consistency of words and actions, consistency in adversity, being true to oneself, wholeness and moral / ethical behaviour (Palanski & Yammarino, 2007). Their practical characterisation of integrity is that integrity is the alignment of an entities words and actions (Krylova, Jolly, & Phillips, 2017; Palanski & Yammarino, 2007).

The definition proposed by Palanski and Yammarino (2007) is closely related to the notion of behavioural integrity first defined by Simons (2002). Simons (2002) explains that behavioural integrity is “the perceived pattern between an actor’s words and deeds”. The inclusion of perception into the definition is important as behavioural integrity is perception based and as it is an ascribed trait, it is subject to biases (Way, Simons, Leroy, & Tuleja,

2018). The definition of behavioural integrity posited by Simons (2002) is the most widely accepted definition of behavioural integrity that is currently used in literature (Krylova, Jolly, & Phillips, 2017; Simons, Leroy, Collewaert, & Masschelein, 2015; Tomlinson, Lewicki, & Ash, 2014).

2.2.2. Theoretical positioning of behavioural integrity

Of late, there has been numerous instances of questionable leadership behaviour that have come to the forefront and have kindled an awareness into the understanding of leader integrity and how it can impact on employee behaviour (Simons et al., 2015). When managers consistently demonstrate behavioural integrity, their behaviour, expectations and responses become more predictable and it ensures that employees do not have to endure uncertainty from their managers in an otherwise unstable and complex work environment (Way et al., 2018). In a complex business environment, employees look to reduce ambiguity and unknowns whilst promoting certainty in their work environments and one of the ways in which this is done is to observe leaders' behaviour (Dieen, Lewicki, & Tomlinson, 2006).

From literature, there are confirmed correlations shown among behavioural integrity and important subordinate organisational behaviours like organisational citizenship behaviour (Simons et al., 2015, Way et al., 2018), lower intention to turnover (Hinkin & Schriesheim, 2015), lower stress and absenteeism (Prottas, 2008, 2013). With such important outcomes of behavioural integrity, it is imperative to understand the extent to which behavioural integrity can influence other important organisational outcomes such as innovative work behaviour.

Leader member exchange theory (Dansereau, Graen, & Haga, 1975) has consequently been studied extensively in organisational behaviour studies. Carnevale et al. (2017) eluded to the point that future research regarding leader member exchange and innovative work behaviour be conducted by separating relational and non-relational antecedents.

Leroy, Dierynck, Anseel, Simons, Halesleben, McCaughey, Savage and Sels (2012) posit that when someone keeps their word, it makes that individual more predictable and trustworthy. The link between leadership and innovation is becoming more important for organisations and it is proposed that leadership has the most influential effect on innovation

(Rosing, Frese, & Bausch, 2011). Scott and Bruce (1994, 1998), have established that leader member exchange and innovation are positively related.

Werbel and Lopes (2009) found that integrity of the supervisor will positively affect the relationship quality in leader member exchange. In an analysis of American as well as Chinese work environments, (Cheng, Jiang, Cheng, Riley, & Jen, 2015), perceived supervisor integrity had a favourable influence on the leader member exchange relationship.

Behavioural integrity, by its definition of word to deed alignment, is separate from moral integrity in that moral integrity means that there is consistency between the manager's and employee's words and actions as well as in terms of values in terms of acceptable practices (Dieen et al., 2006, Tomlinson et al., 2014). This implies that a manager may have high behavioural integrity (keeps their word) but low moral integrity (low values incongruence) (Tomlinson et al., 2014). In this case, the employee knows how the manager will react and can position themselves accordingly to reduce risk to themselves.

2.3. Trust

2.3.1. Definition

For this paper, the best and most appropriate meaning of trust is from Mayer et al. (1995) that defines trust as a "willingness 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" and engage in risk taking in the relationship. This definition is widely supported in literature (Agarwal, 2013; Frazier et al., 2016; Kannan-Narasimhan & Lawrence, 2012; Sue-Chan et al., 2012). Another often used definition of trust is where they propose that "Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another" (Rousseau, Sitkin, Burt, & Camerer, 1998).

It should be noted that in either of the definitions of trust, it makes reference to a willingness or intention to be vulnerable and not necessarily action in taking the risk that is the criteria for trust (Mayer et al., 1995). With trust being associated with an individual being vulnerable,

any break in trust can be volatile and can change rapidly if trust is violated (Schoorman et al., 2007).

2.3.2. Theoretical positioning of trust

Trust is an important facilitator to many important organisational outcomes (Mayer et al., 1995) and will continue to be a pivotal trait in organisational settings (Frazier et al., 2016, Hernandez, Long, & Sitkin, 2014). Furthermore, Sue-Chan et al. (2012) state that trust is likely the most prominent element of any working relationship. In a previous leader member exchange meta-analysis study, it was found that trust was the strongest mediator for task performance and organisational citizenship behaviour (Martin, Guillaume, Thomas, Lee, & Epitropaki, 2016).

In the competitive global economic environment, trust is necessary to help in the ability of a firm to adapt and innovate (Sue-Chan et al., 2012). Trust in the leader reduces some risk that the subordinate intends to take thereby increasing propensity to engage in innovative work behaviour.

Outcomes that are associated with trust which have been found in literature are job performance (Palanski & Yammarion, 2011), organisational citizenship behaviour (Simons et al., 2015, Way et al., 2018), reduced counter-productive behaviours such as absenteeism, stress (Prottas, 2008, 2013) and intention to turnover (Hinkin & Schriesheim, 2015). Leader member exchange theory and trust are closely related (Sue-Chan et al., 2012) with trust between the manager and employee also falling within the ambit of organisational behaviour (Colquitt, Scott, & LePine, 2007).

The prominent behavioural result of trust is risk taking, as proposed by Mayer et al. (1995), and this proposition is supported by Colquitt et al. (2007). Furthermore, the antecedents to trust are leader ability, leader benevolence and leader integrity (Colquitt et al., 2007).

Palanski and Yammarino (2009) suggested a positive link between employee trust in leader and leader behavioural integrity. Palanski and Yammarino (2007) also advanced that trust occurs on different levels viz. individual (manager level), group and organisational level. Although this research focuses on trust on the individual (employee – manager) level, there may be a need for an employee to seek assistance from other departments or more senior

individuals in order to advance an innovative idea. It should be noted though that Fulmer and Ostroff (2017) showed the great extent to which individual level trust had on enhancing group and organisational trust and hence was the most logical point of investigation for this research and for an organisation to influence innovation.

2.4. Innovative work behaviour

2.4.1. Definition

Janssen (2000) defines innovative work behaviour as “the intentional creation, introduction and application of new ideas within a work role, group or organisation, in order to benefit role performance, the group, or the organisation”. Janssen (2000) then goes on to break down innovative work behaviour into three phases that consists of idea generation, idea promotion and idea realization. This definition is supported by Carnevale et al. (2017); Ng and Feldman (2013); Schuh et al. (2018); and Wang et al. (2015).

Innovation covers all phases from idea conceptualization or generation into idea execution or realisation as an implemented innovative idea helps to create value for the organisation. The three stages of innovation are discussed briefly in the sections to follow.

2.4.1.1. Idea generation

Idea generation is the initial stage in the innovative work behaviour journey and is “the production of novel and useful ideas” (Janssen, 2000). The idea generation stage is commonly called creativity and this creativity is oftentimes confused with innovation. It is during this stage where employees may encounter work-related challenges, industry trends or change (Schuh et al., 2018) and come up with ideas to help keep the organisation relevant or to give a competitive advantage in the market. Amabile and Pratt (2016) relates that creativity or concept generation is the first phase of innovation and it is referred to as the “fuzzy front end” (Koen, Ajamian, Boyce, Clamen, Fisher, Fountoulakis, Johnson, Puri, & Seibert, 2002) of innovation.

2.4.1.2. Idea promotion

In the second stage of the innovative process, employees seek support for these ideas through promotion of these ideas to potential enthusiasts (Carnevale et al., 2017; Janssen, 2000). It is during this stage that employees seek contributions from their networks and managers to aid in terms of "inspiration, information, resources, and support" (Wang et al., 2015) to help to move onto the idea realisation stage. As previously stated, it should be noted that Fulmer and Ostroff (2017) showed the extent to which individual level trust had on group trust which could make idea promotion easier for an employee.

2.4.1.3. Idea realization

As described by Janssen (2000), the last stage in the innovation journey is idea realisation. During this stage, employees produce a sample or pilot system that can be functional tested within the company (Janssen, 2000, Scott & Bruce, 1994). During this execution phase of the process, all support and resources have been obtained and there is organisational inertia to ensure the idea is manifested into reality.

2.4.1.4. Innovation process in the organisation

If the innovative exercise that is undertaken is large, affects many parties and complex, then it may be that the person with whom the idea originated from during stage one may not necessarily be the person promoting and realising the idea (stages two and three) (Janssen, 2000, Janssen, van der Vliert, & West, 2004). Due to this, a situation could arise whereby the rest of the team assisting in the innovative exercise is not as enthusiastic about the innovative idea and puts up resistance to the promotion and realisation of the innovative idea (Janssen et al., 2004, Wang et al., 2015).

This creates a hurdle to the innovation process and it is here that management must create and uphold the environment to enable innovation (Carnevale et al., 2017; Lee, 2008). This is done through resource allocation and high levels of support from managers (high leader member exchange relationships) (Carnevale et al., 2017, Yuan & Woodman, 2010).

2.4.2. Theoretical positioning of innovative work behaviour

In today's world of global competition and economic pressures, organisations are seeking to embed innovation in their processes and employees are encouraged to be more innovative (Madjar, Greenberg, & Zheng, 2011; Mumford & Licuanan, 2004; Shin, Yuan, & Zhou, 2017). According to PWC's Global Innovation 1000 study (Jaruzelski, Staack, & Chwalik, 2017), research and development (R&D) spending is at an all-time high of US$702 billion globally and this rise in research and development spending came even with a 2.5 % decrease in profits for the Global Innovation 1000 companies. This represents large investments made in innovation and hence it is important from an organisational view to appreciate the drivers and facilitators of innovation in the workplace. Wang and Dass (2017) have concluded that innovation can result in better financial performance.

This view is supported by Yuan and Woodman (2010) and they go on further to emphasize that employee innovative behaviour is an essential skill that that is essential to function in this competitive environment. There is little doubt that in an age of dynamic change and rapid developments, innovation has become a crucial requirement (Manso, 2017). Innovation or some form of innovation is ubiquitous in organisations mission statements (Amabile & Pratt, 2016). Agarwal (2013) states that innovation has become a vital attribute for organisational sustainability and as such, organisations are increasingly examining factors which can foster innovative work behaviour.

From a review of "Innovation in Firms Across Nations: New Metrics and Drivers for Radical Innovation", Yu (2007) states that the most significant factors for promoting innovation is the culture of the organisation through a tolerance for risk. According to the Global Innovation Index 2018 (Dutta, Lanvin, & Wunsch-Vincent, 2018), South Africa ranked 58th amongst 128 countries in terms of innovation hence innovation is a key component in South African business. There has been a recent proliferation in leading for innovation (Dinh, Lord, Gardner, Meuser, Liden, & Hu, 2014) and managers must strive to create an environment that encourages innovativeness (Carnevale et al., 2017; Lee, 2008). Risk taking and an openness to new ideas is a prerequisite to enable innovation in an organisation (Amabile & Pratt, 2016). Alfes, Truss, Soane, Rees and Gatenby (2013) have concluded in their paper from the service field in the United Kingdom, that it is not necessarily human resource practices that can foster innovation but rather how employees

experience the human resource practice that leads to innovation. This is an important link to the construct of behavioural integrity as it is the subordinate's perceived view of their manager's word to action alignment and not necessarily the actual manager's word to deed alignment.

Agarwal (2013) states that studies on innovative behaviours are still embryonic. This sentiment is echoed by Yuan and Woodman (2010) in that research evidence relating psychological constructs that could explain how and they affect innovative work behaviour remain are lacking and in its infancy.

Organisations face a tension between exploration (innovation) and exploitation (Manso, 2017). Exploration can lead to new superior methods, processes and products however it can oftentimes lead to a waste of time, resources and effort whereas exploitation continues down a given path of efficiency, control, certainty, and variance reduction however it can leave an organisation vulnerable to competitors (Manso, 2017; O'Reilly & Tushman, 2013). In innovation related activities, there are two main strategies which are called exploration and exploitation (Wang & Dass, 2017). In exploration, manager's actively seek new technologies, processes and encourage risk taking whilst in exploitation, the manager attempts to make optimal use of systems within existing constraints and concentrates on the execution process rather (Wang & Dass, 2017).

The strength of the leader member exchange interaction contributes to employee innovative work behaviour (Carnevale et al., 2017; Janssen & Yperen, 2004). Low leader member exchange leads to low innovative work behaviour which could be explained by the employee perceiving a lack of support and resources from their manager and thus affects innovative work behaviour (Janssen & Yperen, 2004, Scott & Bruce, 1998). However, from a study conducted in Singapore (Lee, 2008), results showed that innovative work behaviour is not influenced by leader-member exchange quality. This was explained through the employees being highly educated, preferring to work independently, having the confidence to drive innovation alone and having an environment that supports innovation (Lee, 2008).

2.5. Relationships between construct

2.5.1. Relationship between behavioural integrity and trust

From Simons (2002) proposition 2 where it states that “Trust will mediate positive relationships between BI and employee performance, intent to remain, organization citizenship behaviour, and discretionary service behaviour”. From this proposition, it is not clear if trust is a partial or full mediator of behavioural integrity. Hinkin and Schriesheim (2015) established that trust was a strong partial mediator among behavioural integrity and satisfaction with supervisor as well as between behavioural integrity and organisational commitment. Colquitt et al. (2007) found that integrity was a strong antecedent to trust and found trust to have partially mediated the interaction among integrity and risk taking.

There is a definite association amongst trust and predictability (Mayer et al., 1995). This predictability advocates for some relationship between behavioural integrity and trust as behavioural integrity relates to a consistency of action on the part of the supporting actor which relates to behavioural integrity. Simons, Friedman, Liu and McLean Parks (2007) articulated this relationship well in that when trust is described as an employee’s openness to be vulnerable, then any perception with regards to misaligned values in their manager would result in the employee feeling that their manager is malicious which would reduce willingness to be in this vulnerable state.

Kannan-Narasimhan and Lawrence (2012) explains that the affirmative link among behavioural integrity and trust can be rationalised when considering fundamental attribution error theory. It is explained as when an employee perceives contradiction between their supervisor’s words and actions, the employee is will likely to attribute it to their manager’s character rather than extenuating circumstances (Kannan-Narasimhan & Lawrence, 2012).

Employee perceptions of their manager’s behavioural integrity has been associated with trust in managers (Friedman, Hong, Simons, Chi, Oh, & Lachowicz, 2018). Simons et al. (2015) also investigated and found a definite association between behavioural integrity and trust and found that specifically with regards to organisational commitment, this relationship was stronger than a psychological contract breach.

2.5.2. Relationship between employee trust and innovative work behaviour in employees

From a study of R&D workers commissioned in the US by Scott and Bruce (1994), they established that subordinates who higher levels of trust in their manager had reported that the organisation was more supportive of innovation which could possibly encourage the employee's ability to innovate. This can be rationalised through leader member exchange theory in that good quality interactions between a supervisor and subordinate is characterised by strong foundations in trust (Graen & Uhl-Bien, 1995). A superior level of leader member exchange and trust in an interaction with a manager can lead to a valuable resource that can increase employee status and reduce potential image loss for an innovative employee (Yuan & Woodman, 2010).

Innovative work behaviour in the employee inherently involves risk-taking on behalf of employee (Manso, 2017). Kahn (1990) found that trust resulted in predictable, consistent, clear, and non-threatening outcomes which enable employees to understand the boundaries of what is acceptable and what will be the consequences of their actions. According to Colquitt et al. (2007), trust is a substantial antecedent to risk taking and therefore increasing trust of employee in their manager will increase risk taking and consequently innovation.

2.5.3. Relationship between manager behavioural integrity and employee innovative work behaviour

There was no direct relationship found in literature between manager behavioural integrity and employee innovative work behaviour. The closest study to the research undertaken here was in a study by Palanski and Vogelgesang (2011) where they studied the interaction among behavioural integrity and follower creativity where they found this to result in a positive association. Since creativity forms the first stage of innovative work behaviour, this could imply that there should be an association among manager behavioural integrity and employee innovative work behaviour. Leadership plays a critical role in encouraging innovation (O'Cass & Sok, 2013). There is evidence in literature regarding positive association of leader-member exchange and innovative work behaviour (Schuh et al., 2018; Scott & Bruce, 1994).

The importance of understanding how manager behavioural integrity influences employee innovative work behaviour is crucial to organisational success. As substantiated earlier, employee innovative work behaviour is essential to companies ensuring they stay competitive in an increasingly complex business environment. Furthermore, it should be noted that Fulmer and Ostroff (2017) show the importance of individual level (manager-employee) trust on enhancing group and organisational trust and hence is the most logical point of investigation for this research.

2.5.4. Relationship between manager behavioural integrity and employee innovative work behaviour with trust as a mediator

Literature pertaining to the link between manager behavioural integrity and employee innovative work behaviour with trust being a mediator could not be found when reviewing existing theory. From the literature review, the expectation is that trust will have a partial mediating influence in the correlation among behavioural integrity and innovative work behaviour.

2.6. Context

2.6.1. Business context

Dwight D. Eisenhower notably stated that *"The supreme quality for a leader is unquestionably integrity. Without it, no real success is possible, no matter whether it is on a section gang, a football field, in an army, or in an office".*

None can be truer in light of recent scandals regarding poor leadership behaviour such as Wells Fargo, Volkswagen, Steinhoff and FIFA. Of particular interest are studies conducted by Scott and Bruce (1994, 1998) where they found that leader member behaviour positively influenced innovation in engineers and scientists which is closely related to the study at hand. Bauer and Leker (2017) have outlined the importance of innovation especially in the chemical sector due to the nature of the industry and the large costs that can be associated with the execution of innovative ideas.

2.6.2. Individual context

2.6.2.1. Effect of organisational tenure and innovative work behaviour

In general, it can be assumed that older employees possess more in role experience and task specific skills that has led to more routine in their job (Binnewies, Ohly, & Niessen, 2008) which could possible reduce their tendency to innovate. There is also a risk of loss of pride should an innovative work effort not be successful and this may deter an older individual to attempt to be innovative (Ng & Feldman, 2010). On the other hand, Ng and Feldman (2010) argue that organisational tenure leads to political savviness which can lead to better framing and lobbying of their ideas and this could potentially lead to more innovative behaviour as part of the innovation process is to gather organisational support for the idea for which the longer tenured employees may have a greater influence on. From the meta-analytic research paper by Ng and Feldman (2013), it was observed that organisational tenure was largely unrelated to innovative work behaviour. It is expected that workers with a lower tenure in a department may be less effective at innovative work behaviour as innovative efforts may require knowledge of who to lobby to support and idea and if the unit is accepting of such innovative behaviours.

2.6.2.2. Effect of age and innovative work behaviour

From a literature study done by Frosch (2011), it was found that employees in the engineering sector generally showed greater innovative work behaviour in the mid to late forties. Frosch (2011) goes on to state further that a youth centred strategy does not necessarily imply more innovation and that older employees fare much better in innovative work behaviour that was expected. Ng and Feldman's (2013) study supported the notion about age not being related to innovative work behaviour. In the chemical industry, it can be expected that younger workers will be less innovative as it is a highly specialised industry and requires some practical knowledge of their field before becoming effective in innovative work behaviour.

2.6.2.3. Effect of length of relationship between manager and employee

Sin, Nahrgang and Morgeson (2009) stated that as there is an increase in the length of time of the relationship among subordinate and manager, the quality of the leader-member interaction increases. This might be explained as through multiple interactions between

manager and employee occur, trust increases (Martin et al., 2016). Whilst conducting the literature review, no information pertaining to the duration of the interaction between the leader and the subordinate and innovative work behaviour could be found.

2.6.2.4. Effect of gender

From literature, a variation exists in how male and female employees go about their innovative work behaviour (Pecis, 2016) in innovation driven environments. Female scientists face discrimination (Williams, Kilanski, & Muller, 2014) and this could lead to a potential decrease in innovative work behaviour. Carrasco (2014) investigated innovative work behaviour in women in science, technology and innovation fields and found that woman are disadvantaged when it comes to innovative practices.

2.6.2.5. Innovation as a job requirement

In a study across different industries in China in 2017, it was found that the role requirements in terms of innovation helped to foster significantly more innovative work behaviour in individuals with a low intrinsic interest in innovation (Shin et al., 2017). In another study in the service industry in Belgium in 2017, it was found that when there is an expectation of a high degree of innovation, the employee experiences the job as important and meaningful and finds it motivating thus fostering high innovative work behaviours (Audenaert, Vanderstraeten, & Buyens, 2017). Yuan and Woodman (2010) also conducted a study in various industries in the US (including the chemical industry) and found that the innovative job requirement positively influenced the employees innovative work behaviour.

2.7. Conclusion

In this chapter, the constructs of behavioural integrity, trust and innovative work behaviour were defined and discussed. A literature review that was based on recent and quality (peer reviewed and from reputable journals) articles on the different constructs were presented and the existing relationships between the constructs were highlighted. The chapter also introduced and briefly discussed some important contextual factors that could possibly influence the study.

Considering the literature review, the relationship among manager behavioural integrity and employee innovative work behaviour could not be found. However it is anticipated that

behavioural integrity of managers will predict employee innovative work behaviour. Trust is also likely to have a partial mediating influence in the association among behavioural integrity and innovative work behaviour.

3. Research questions and hypotheses

The research questions and hypotheses are presented in this chapter which were developed from the research objectives presented in chapter 1 and supported by the literature review in chapter 2. An illustration of the research objectives are presented below in Figure 1.

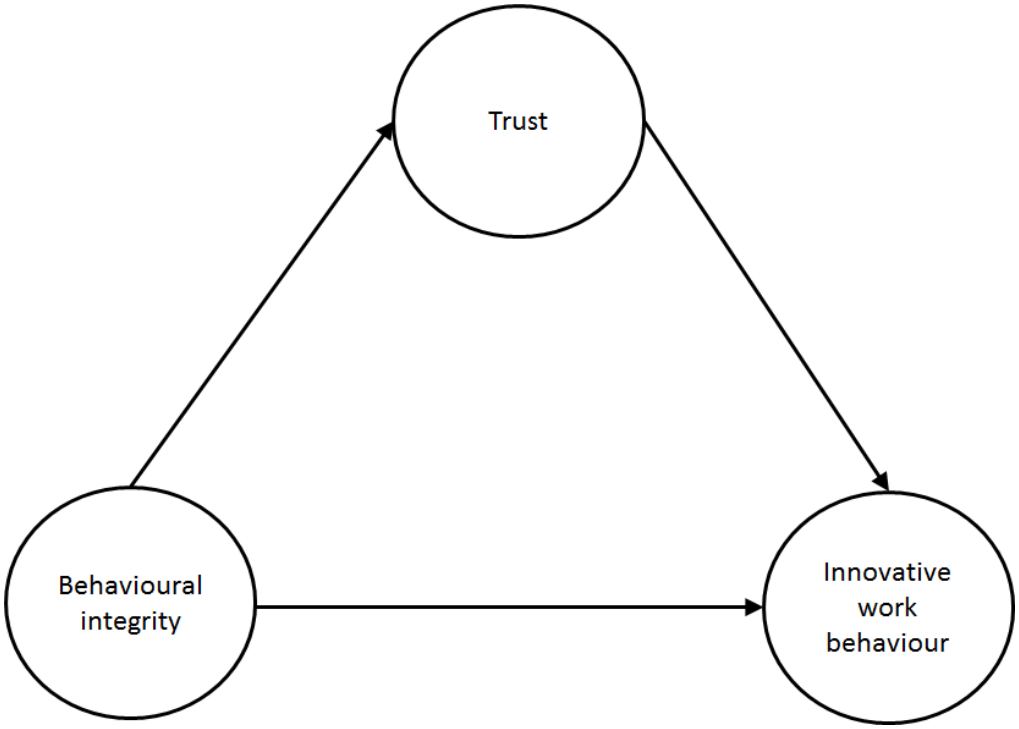

Figure 1: Graphical model of relationship between behavioural integrity of managers, employees trust in manager and innovative work behaviour of employees

3.1. Research question one

Does behavioural integrity of managers positively predicts employees trust?

Based on the literature review undertaken from previous chapter proof exists of the positive relationship between the supervisor's behavioural integrity and employees trust (Colquitt et al., 2007). Hinkin and Schriesheim (2015) further reinforce this association where they conclude that behavioural integrity and trust are strongly related however they are each still

unique concepts. The intent of this research question is to determine if this relationship is valid within the South African context.

Hypothesis one:

H_0^1: Behavioural integrity of managers does not positively predict employees trust

H_1^1: Behavioural integrity of managers positively predict employees trust

3.2. Research question two

Does employees trust positively predicts innovative work behaviour of employees?

From theory, there was no direct correlation amongst trust and innovative work behaviour. However by including vulnerability into the description of trust (Mayer et al., 1995) along with a link amongst trust and risk (Rousseau, Sitkin, Burt, & Camerer, 1998), it could be expected that individuals engaging in innovative work behaviour put themselves in a vulnerable and risky position and hence should trust their manager to support their innovative ideas.

Hypothesis two:

H_0^2: Employee trust does not positively predict innovative work behaviour of employees.

H_1^2: Employee trust positively predict innovative work behaviour of employees.

3.3. Research question three

Does behavioural integrity of managers positively predicts and innovative work behaviour of employees?

From literature, no direct relationship between behavioural integrity and innovative work behaviour was found. However since there was a correlation among leader-member exchange and subordinate innovative work behaviour (Schuh et al., 2018; Scott & Bruce, 1994) along with a positive correlation between integrity and leader member exchange (Werbel & Hendriques, 2009), it was postulated that there will be a predictive association amongst behavioural integrity and innovative work behaviour.

Hypothesis three:

H_0^3: Behavioural integrity of managers does not positively predicts innovative work behaviour of employees.

H_1^3: Behavioural integrity of managers does not positively predicts innovative work behaviour of employees.

4. Research methodology

4.1. Introduction

In this chapter, the research methodology approach which was adopted is presented. The approach taken is a deductive approach as existing theory will be used to formulate the research objectives and questions (Kele, 2018). The methodology that was followed was to use a survey and a mono method quantitative research design was chosen. The type of study is a descriptive study since the aim was to describe the interaction amongst the constructs. The study is a cross sectional study as data collection was done once over a short duration.

4.2. Research setting

In a highly technical environment such as the energy and chemicals sector, the drive for innovation can lead to a competitive advantage. As stated by Bauer and Leker (2013), managers in chemical companies underestimate the importance of process innovations for revenue creation. Innovation can be achieved through the encouragement of innovative work behaviour in employees.

The research setting was in the South African technology division of a large multi-national energy and chemicals company. Part of the organisation's values refer to integrity and innovation which rolls down to the business unit making it an ideal setting to conduct the research. As identified in chapter 2 (section 2.6.2.5), job role requirements affects innovative work behaviour of employees (Audenaert et al., 2017; Shin et al., 2017). According to the study by Yuan and Woodman (2010) of various industries in the US, including the chemical industry, they found that the innovative job requirement positively influenced the employees innovative work behaviour.

Following this approach, only business units with some degree of innovation as a job requirement was considered for the research and as such, these were found to be the technology divisions. It must be recognised that the research and development division (a division that is usually associated with innovation) was not considered in the study as this division was in a restructuring process at the conceptualisation of the research and the knock on effect on trust between manager and employee was questioned (Lee & Teo, 2005). Literature suggests R&D divisions are generally considered as part of the target

audience as they should exhibit a high degree of innovation in their role requirements (Yuan & Woodman, 2010).

4.3. Population size

The questionnaire was distributed to 752 potential respondents. The nature of the business units ensured all respondents are educated to a secondary level at minimum with the majority being educated to the tertiary level. The population was the employees from the technology business units of the energy and chemicals company. Permission had been requested and received from the relevant management within the technology business units to conduct studies within the business unit provided the anonymity of the company and respondents are assured.

4.4. Unit of analysis

The responses of the employees from the chosen technology business units within a South African energy and chemicals company was chosen as the unit of analysis for the study.

4.5. Sampling method

The type of sampling that was conducted was non-random convenience sampling. The questionnaires were distributed to all personnel within the technology divisions within two operating entities of the company via the use of existing company mass distribution mailboxes. The two business units are selected as they are large, accessible and fit the role requirements for innovative work behaviour. The responses were then analysed for completeness of data (see Table 1 below). The remaining respondents were the sample size that was analysed.

Table 1: Summary of response data

Number of survey issued	Number of surveys not received	Number of responses	Number of useable responses	Response rate
752	15	120	118	16%

Upon a brief investigation into the response rate of a survey conducted within one of the relevant business units of the company in 2017 revealed a rate of 27% for responses. This survey that was previously conducted was heavily sponsored by the company's management thus encouraging participation in the survey. Considering Baruch and Holtom (2008) the average response rate from a questionnaire conducted in an organisation is 36% with a standard deviation of 19% which implies that the sample falls within the range of previous literature however it is on the lower end.

The study was cross sectional in nature as data collection was over a small time period and only collected once per respondent. Moutinho and Hutcheson (2011) state that cross-sectional studies are the most frequently used descriptive design in research.

4.6. Measurement instrument

The questionnaires chosen were established instruments in an attempt to make sure the data collection reliability was ensured. This was accomplished through the checking of Cronbach alphas of previous studies using these scales. Since the questionnaires were sent to employees, it was subject to perception. Robbins and Judge (2015) discuss the three influences that affect perception viz. factors in the observer (biases), factors in the observed and factors in the environment. It is assumed that the study outcomes are dependent on the perception of the employees rather than target or situational factors even though the energy and chemicals industry is experiencing a decline, this has been occurring for the last two years.

The measuring instruments employed were from standardised validated questionnaires that are frequently used for the constructs. Since all questionnaires are Likert scales, all data collected was ordinal. Questionnaires are cheap and can collect information from a large sample group by administering these same questions to the entire group (Moutinho & Hutcheson, 2011; Saunders & Lewis, 2012). The questionnaires are self-administered and could be done any time at the respondents pace.

The drawbacks to the use of questionnaires are that the detail of data collected is less than other strategies (Saunders & Lewis, 2012). The respondent may also not fully understand the question when answering which can lead to misleading data (Kistan, 2018). Hinkin and

Schriesheim (2015) do however report that self-administered surveys can exhibit artifactual findings.

Table 2: Sources of questionnaires

Construct	Scale used
Behavioural integrity	Behavioral integrity scale used by Simons et al. (2007)
Trust	Trust scale (Schoorman & Ballinger, 2006) used by Schoorman et al. (2007)
Innovative work behaviour	Innovative work behavior Scale proposed by Janssen (2000) made up of three subcomponents of idea generation, idea promotion and idea realisation.

4.6.1. Behavioural integrity scale

Behavioural integrity of the manager was measured from the employee perspective using the scale designed by Simons et al. (2007). This scale was selected due to it being used in various different studies to confirm other constructs around behavioural integrity (Greenbaum et al., 2012; Prottas, 2007; Simons et al., 2007; Simons et al., 2015). A Cronbach alpha of 0.89 was recently reported from a study using this scale (Friedman et al., 2018). The scale used measured the behavioural integrity of the leader as perceived from the employee's viewpoint. Sample items are "There is a match between my manager's words and actions" and "My manager practices what he / she preaches".

4.6.2. Trust scale

Trust was evaluated using an instrument suggested by Schoorman et al. (2007) due to this instrument having a Cronbach alpha coefficient of 0.84 in a previous study. One item on the scale was changed to refer to innovation instead of creativity as creativity is just one part of innovation (idea generation stage) (Janssen, 2000) and the term supervisor was changed to manager for congruence with the other scales used in the study. Sample items are "I will be willing to let my manager have complete control over my future in this company" and "My manager keeps my interests in mind when making decisions".

4.6.3. Innovative work behaviour scale

Innovative work behaviour (IWB) was evaluated by making use of the scale developed by Janssen (2000). The IWB scale that was used was the self-assessment scale and was a nine point scale with three sub-scales pertaining to idea generation, three items pertaining to idea promotion and the last three items pertaining to idea realisation. According to a study on measures for IWB done by de Jong and den Hartog (2010), the Janssen IWB scale has a verified Cronbach alpha of 0.95 for the self-rating instrument. Furthermore, de Jong and den Hartog (2010) report that there is no validity concerns with regards to innovative work behaviour scale proposed by Janssen (2000). Sample items for this scale are "I create new ideas for difficult issues" and "I transform innovative ideas into useful applications".

Table 3: Overview of scales used

Construct	Description	Cronbach alpha*
Behavioural integrity	Eight item, five point Likert scale, single component	0.89
Trust	Seven item, five point Likert scale, single component	0.84
Innovative work behaviour	Nine item, five point Likert scale, three component	0.95

*Cronbach alphas that have been reported in previous studies

Descriptive questions were asked to collect data on age, tenure in organisation, tenure with current manager, gender and highest qualification obtained. The questionnaires were distributed via SurveyMonkey™ through the business unit's mass distribution mailboxes. Respondents with incomplete data were omitted from the analysis. Respondents who have left the employment of the company but were still on the distribution lists were also eliminated from the calculation of response rate.

4.6.4. Validity and Reliability

4.6.4.1. Validity

Validity is the measure of the accuracy of the scale that was used to collect data (Hair et al., 2014). Validity from both a convergent and discriminant point was checked for the research undertaken. The convergent validity resulting from the confirmatory factor

analysis was checked by evaluating the factor loading. For convergent validity, the factor loading must have been above 0.5. The average variance extracted (AVE) was used as a check to ascertain whether there was a concern with discriminant validity. From literature, there is evidence of an association between behavioural integrity and trust.

4.6.4.2. Reliability

The reliability is the consistency measure of the scales that are used (Hair et al., 2014). To measure validity reliability, the Cronbach alpha was used and acceptable limits for Cronbach alphas are greater than 0.7 (Hair et al., 2014).

4.6.5. Survey design

SurveyMonkey™ was used as the platform for the questionnaire. The questionnaire was designed into five main pages as further described below.

- Consent statement with contact details. The consent statement also guaranteed the anonymity of the respondents data.
- Behavioural integrity (BI) scale page
- Trust scale (Schoorman & Ballinger, 2006) page
- Innovative work behaviour scale page
- Descriptive questions page asking age, tenure in organisation, tenure with current manager, gender and highest qualification obtained.

The data gathered from the scales used were of five point Likert scale and data was coded in order make data analysis easier.

4.6.6. Testing of survey

Prior to distributing to the target population, the questionnaire was tested to solicit feedback on the questionnaire. Five respondents who did not form part of the target population, however the nature of their job related to innovation in order to obtain their feedback, were selected to test the questionnaire. After open feedback, questions were asked about the time to complete, language, general layout of questionnaire as well as understanding of questions. From the test respondents, there were no further suggestions to modify the questionnaire.

4.7. Analysis approach

4.7.1. General approach

The general approach taken was to first conduct demographic and descriptive statistics and then conduct data preparation on the results from the survey. Thereafter inferential tests were done to assess the hypotheses from chapter 3. The computer software used to evaluate the sample were Microsoft Excel 2013 for descriptive and demographic statistics and IBM SPSS AMOS version 25 for all other statistical analysis described below. The choice of IBM SPSS AMOS was motivated by its covariance approach which provides more robust estimations of the model fit indices (Hair et al., 2014).

All statistical analyses were assessed at a significance level of $\alpha = 0.05$. This is supported by literature were the majority of studies reviewed were conducted at with a 95 % or sometimes higher confidence interval (Fritz, O'Niell, Popp, Williams, & Arnett, 2012; Hinkin & Schriesheim, 2015; Scott & Bruce, 1994; Tomlinson et al., 2014).

4.7.2. Descriptive and demographic questions

The data for the descriptive demographic information questions were collected in two forms with the questions regarding gender and level of education being collected in nominal data whilst ratio data was used to collect answers for the questions related to age and duration of work with manager and tenure with organisation. The descriptive questions asked were guided from literature as described in chapter 2 regarding variables that could the constructs of the study. Hair, Ringle and Sarstedt (2013) state that often time skewness and kurtosis are omitted from most analyses even though these parameters can have important implications for analysis and hence the skewness and kurtosis was checked and reported in chapter 5.

4.7.3. Preparation for factor analysis

When using established measurement scales, a factor analysis has to be done. The reason why factor analysis was done was to ensure that the data, when consolidated, loaded closely to constructs proposed (Pallant, 2010) and explores the correlation between the respondents to the study (Hair et al., 2014). The type of rotation that was selected was the

orthogonal varimax factor solution. The reason why it was chosen was that an orthogonal solution was easier to interpret and report and the varimax was specifically chosen was to limit the amount of high loading on each factor (Pallant, 2010). There are three key phases when performing a factor analysis. The primary check is to confirm if collected data was suitable for factor analysis. One of the main concerns with the suitability of data for factor analysis is the sample size (Pallant, 2010).

Pallant (2010) discussed literature where it is argued that there should be between five and ten points of data per item that needs to be analysed. In the case of this study, using a minimum of five points of data per item to be analysed resulted in a required set of data of 120 points (24 items against a ratio of 5 respondents: 1 item/question) of which 118 was obtained from the data collected. The second issue reported by Pallant (2010) is the concern regarding strength between correlations of the items of the scales. This was addressed by analysing the results from the rotated component matrix in which the strength between correlations were checked. Pallant (2010) advises a threshold limit of a minimum of 0.3.

Before conducting the factor analyses, the Kaiser-Meyer-Olkin (KMO) and a test for sphericity (Bartlett's Test) was utilised to understand if the data collected was valid and suited for factor analysis. Pallant (2010) suggests that the KMO value of 0.6 or above is acceptable whilst the test for sphericity must be less than 0.05 in order to be significant. Thereafter confirmatory factor analysis (CFA) through structural equation modelling (SEM) was performed for validation of the model.

The total variance explained test was used to validate the existence clear differences in constructs in the opinions of the persons who responded completely to the survey. The total variance explained is obtained by running a principal component analysis (PCA) and then identifying eigenvalues that are greater than one. These eigenvalues are important to also understand the effect of these main components (grouping by respondents) on the total variance explained.

4.7.4. Research question one approach

After the preparation of data was done, the initial model was examined through confirmatory structural equation modelling in IBM SPSS AMOS version 25. Hair et al. (2014) state that

the validation of the results obtained from factor analysis is an important part of the analysis when attempting to define the structure amongst the variables and structural equation modelling (a multiple regression technique) is one method to evaluate as it allows the analysis of separate multiple regression equations estimated simultaneously.

After evaluation of the model, there was a need for refinement. The component matrix was used to help guide the refinement of the model by eliminating items or questions based on their high standardised residual covariance coefficients in that anything that reported a standardized residual covariance coefficients of greater than |2.5| was eliminated (Hair, Black, Babin, & Anderson, 2014). The validity and reliability was run on the refined model thereafter and the results checked to ensure that the model was satisfactory in terms of reliability and validity. From this analysis, there was a discriminant validity concern even after deleting items to improve the model.

Research question one was evaluated using the regression analysis results from IBM SPSS AMOS at a 95% confidence interval. The question needed to understand the correlation between variables and hence the regression analysis was chosen.

4.7.5. Research question two approach

Research question two was analysed in a similar method as to research question one where the correlation between trust and innovative work behaviour was analysed. The same approach of regression analysis in IBM SPSS AMOS was used with a 95% confidence interval. Research question two is an important relationship to understand as the result will guide the existence of a mediating model or not. This is due to the understanding that in mediation, there should be an indirect relationship that is significant (MacKinnon, Fairchild, & Fritz, 2007).

4.7.6. Research question three approach

Research question three followed the same approach as research question one and two. Research question three attempted to identify the direct relationship between behavioural integrity and innovative work behaviour. Research question three is also an important relationship to help understand (if there is a relationship) if the relationship is a partial or fully mediating relationship.

4.8. Assumptions

From a model view, there is an assumption that there is some basic underlying relationship between the constructs and that the sample population is homogeneous with regards to constructs of the study (Hair et al., 2014). From a statistical point, there is an assumption of normal distribution of the data ((Hair et al., 2014). There is also an assumption that the items will load sufficiently across factors (Hair et al., 2014).

4.9. Limitations

From Hair et al., (2014), the minimum number of respondents to achieve reliable results can be determined from the number of questions using a ratio of 5:1 with a more acceptable ratio at 10:1. The sample size is just under the minimum acceptable amount (118 respondents versus 120 respondents). The quality of the sample responses can also affect the model by directly incorporating measurement error as well (Baron & Kenny, 1986).

Although integrity is an important feature in all types of leadership (authentic, transformational, ethical and spiritual) (Palanski & Yammarino, 2011), it could be argued that it carries different weighting in these different forms. A further study could be commissioned to investigate if there is any major relationship with respect to type of leadership. Furthermore, since behavioural integrity is a measure of the leader by the employee, it could be prone to biases (Friedman et al., 2018; Palanski & Yammarino, 2007). This could lead to a skew responses and hence an incorrect conclusion from the study.

The company and industry should be plotted on the Ansoff matrix to see at which phase of the business life cycle it is in as this can influence the requirement for innovation (Danvila-del-Valle, Lara, Marroquín-Tovar, & Zegarra Saldaña, 2018). It is expected that innovative behaviour will be higher in certain phases of the matrix compared to other phases (e.g. new product development versus market penetration strategy).

4.10. Conclusion

This chapter summarises the research approach adopted to conduct this study. The intent of this research methodology section was to give an outline the approach taken along with reasoning as to why this path was chosen. Concerns, assumptions and limitations to the study was also discussed to provide the framework as to which the

results should be considered. The main concern from chapter 4 is one of discriminant validity.

5. Results

5.1. Introduction

In chapter 5, the results of the analyses are presented by using the research methodology defined in chapter 4. Firstly, the descriptive statistics are presented, with the factor analysis that follows. Thereafter, the results of the structural equation modelling are shown proceeded by a check on validity and reliability of the model. Finally, results from testing of the hypotheses are shown in section 5.6.

5.2. Demographic statistics

This analyses the details of the demographic statistics of the respondents. The following descriptive statistics are reported below:

- Age of the respondents
- Number of years of experience of respondents
- Number of years worked with current manager
- Education level of respondents

From Figure 2 below, it was observed that the bulk of respondents (37 %) are in the age category of 30 to 39. The sample is skewed to the left with 82 % of respondents being less than 50 years of age.

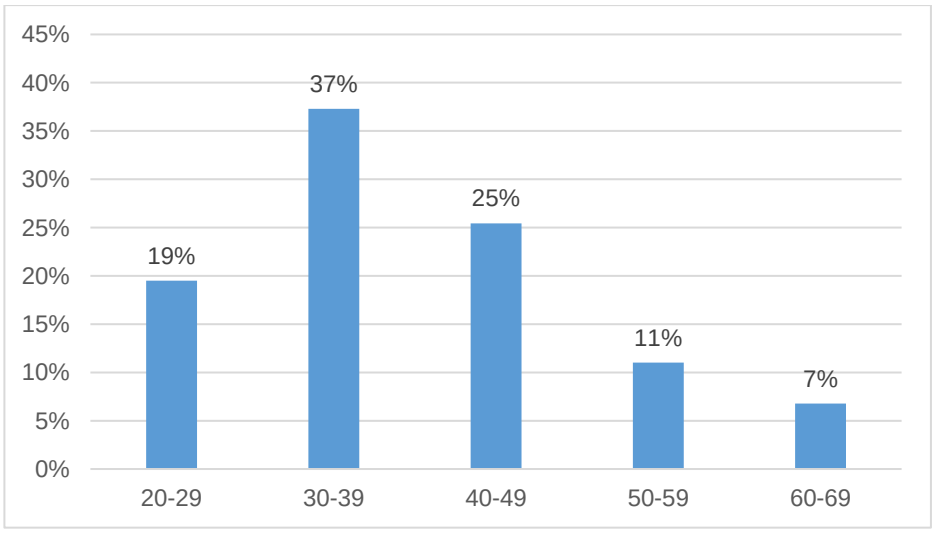

Figure 2: Frequency distribution of age of respondents participating in survey as a percentage

The data presented in Figure 3 below shows that the population is skewed to the left with largest portion of the population have less than five years of experience and 74% with less than 16 years of experience.

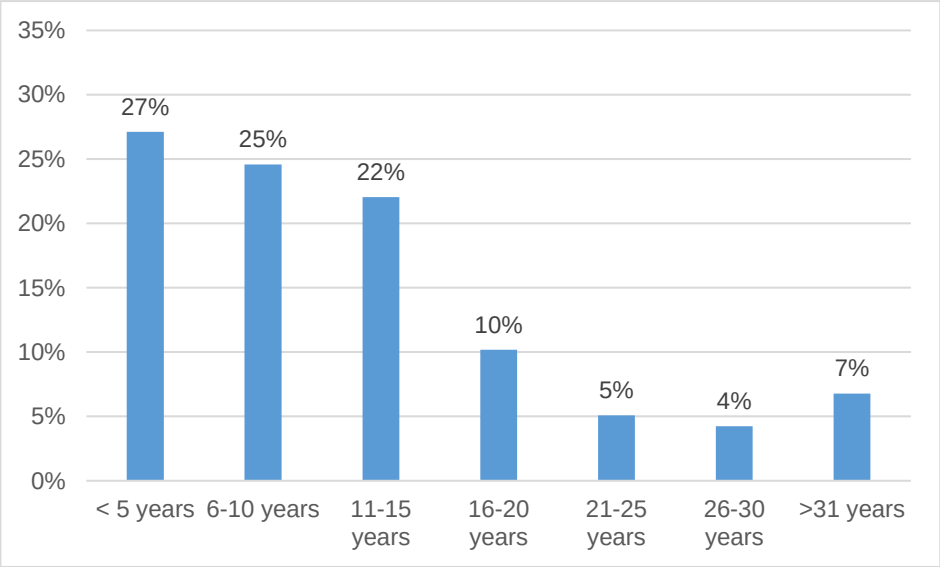

Figure 3: Frequency distribution of number of years of experience of respondents participating in survey as a percentage

From Figure 4 below, a large portion of the sample (37%) have been reporting to their present manager for one year or less. Furthermore, 73% of the population has reported to their present manager for three years or less. This implies a very high turnover or movement of personnel within these business units. From this information, discretion must be exercised when drawing universal deductions from the outcomes of the study as the majority of this respondents had a low tenure with their current manager. This is a concern as Sin et al. (2009) and Martin et al. (2016) promote that longer tenure with a manager encourages a stronger leader-member exchange which leads to a stronger trust relationship. Although the literature review from chapter 2 did not show any direct link among behavioural integrity and trust, it was expected that if an employee does not have sufficient time to analyse the manager's behavioural integrity, the trust in the relationship should be less with respect to behavioural integrity.

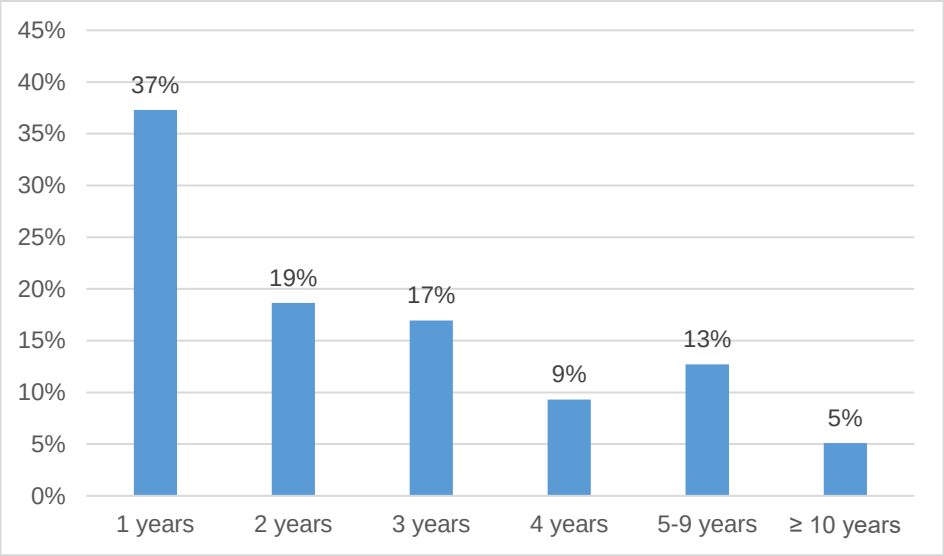

Figure 4: Frequency distribution of number of years of worked with current manager of respondents participating in survey as a percentage

An interesting observation of the sample is that there is approximately two Bachelors Degrees per one Masters Degree (Figure 5). From consultation with the human resources department, the ratio of Bachelors Degrees to Masters Degrees for the entire population sampled was at a ratio of ten is to one. This implies that discretion must once again be applied when interpreting the statistics due to the sample not being true reflection of the population. This is rationalised as the Masters student will have had opportunity to write a report as part of their Masters degree and understand the importance of the process.

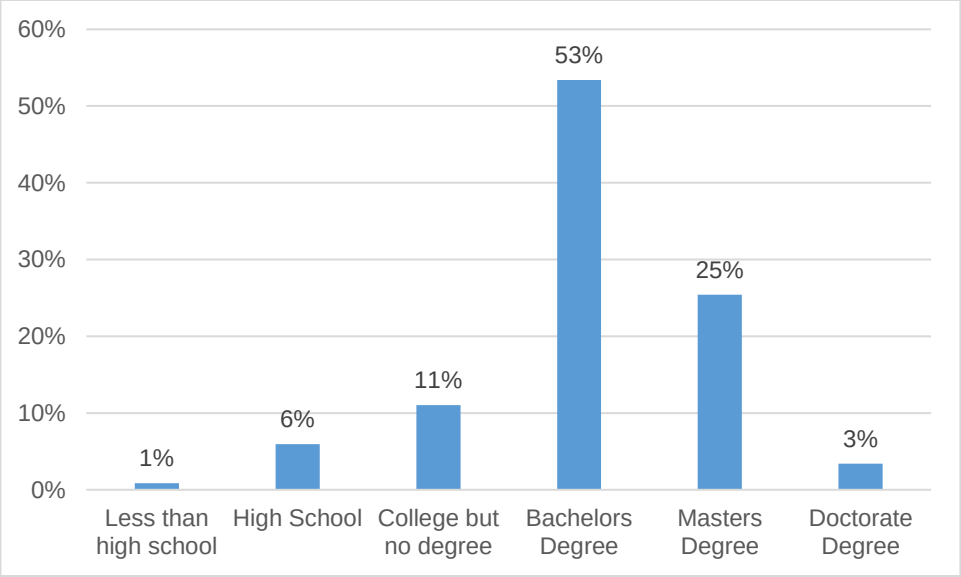

Figure 5: Frequency distribution of level of education of respondents participating in survey as a percentage

As depicted in Figure 6, the ratio of male to female respondents represented in this sample is 14 males for every 10 females.

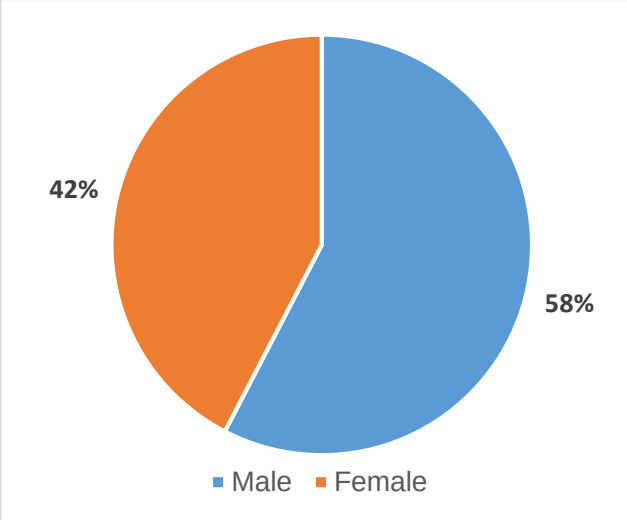

Figure 6: Male to female respondents participating in the survey as a percentage

Summary of demographic statistics

From the demographic statistics, the main population (37%) is between the ages of 30 to 39, have an average work experience of 12 years, have worked with their manager on an average of three years, and are highly educated with the majority of the population (53%)

having a Bachelor's Degree. The sample also shows that males (58%) are more represented in the sample than females (42%).

5.3. Descriptive statistics

Table 4 depicts the frequency distribution of respondent's answers from the surveys. In Table 5, the aggregated means, medians and standard deviations of data collected per construct are shown. This data is also represented graphically in Figure 7, 8 and 9 below. For the individual items per scale, see Appendix B where the data is presented and discussed. Table 6 shows the results for the normality check of each item used.

From Table 4, it was observed that a large volume of responses (45%) for behavioural integrity fall into the "Usually" category indicating a generally high perception of behavioural integrity. Trust was followed a fairly even bell curve shape with "Sometimes" being the highest frequency (26%). Innovative work behaviour showed the highest frequency (39%) at "Sometimes". It was interesting to note the frequency distribution of the components that build up innovative work behaviour (idea generation, idea promotion and idea realisation). A noticeable point is that of lower frequency responses to the category "Rarely" in idea generation as compared to idea promotion and idea execution which display fairly similar distributions. This could imply that there are much more ideas generated rather than promoted or executed. This could be the consequence of constraints on available budgets and resources.

Table 4: Frequency distribution of responses collected from questionnaires

	Perception of employees	Never	Rarely	Sometimes	Usually	Always
Constructs	**Behavioural integrity**	2%	8%	24%	45%	22%
	Trust	11%	21%	26%	25%	17%
	Innovative work behaviour	3%	9%	32%	39%	16%
	Idea generation	3%	4%	32%	42%	19%
	Idea promotion	3%	11%	32%	38%	17%
	Idea realisation	3%	13%	32%	38%	14%

Table 5 shows the aggregated means, medians and standard deviations of data collected per construct. From Table 5, Trust had the lowest average mean and the highest standard deviation implying that on average, trust is fairly average however it is also very

widespread across the sample. This information is also illustrated in Figure 7, 8 and 9 below.

Table 5: Aggregated means, medians and standard deviations of the data collected per construct

		Mean	Median	Standard Deviation
Constructs	**Behavioural integrity**	3.77	4.00	0.92
	Trust	3.16	3.07	1.15
	Innovative work behaviour	3.57	3.67	0.95

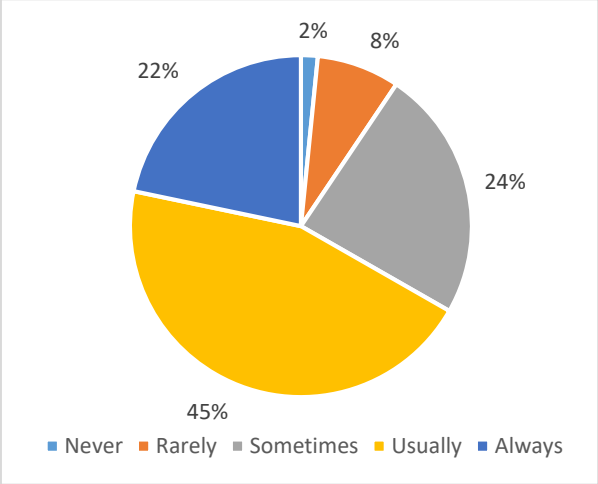

Figure 7: Pie chart representing the responses of behavioural integrity

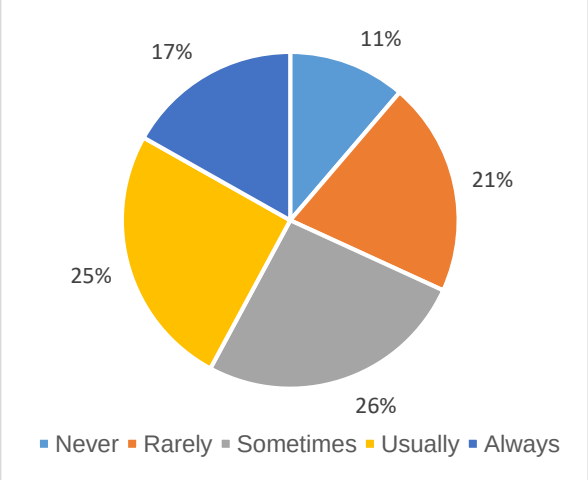

Figure 8: Pie chart representing the responses of trust

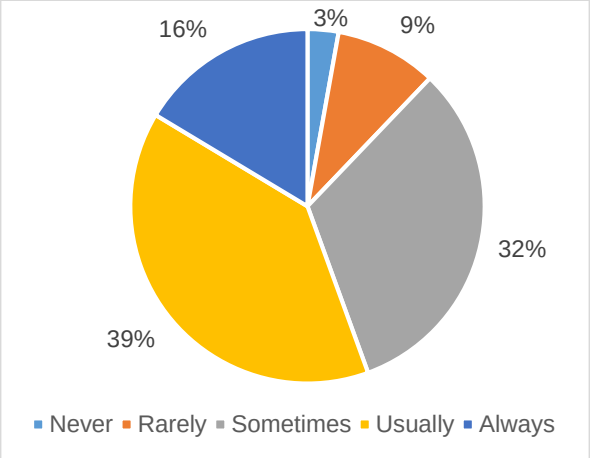

Figure 9: Pie chart representing the responses of innovative work behaviour

The difference between groups were tested from the sample data collected by using T-tests in Microsoft Excel. The groups were split relatively similar to the categories as depicted in Figure 2 to Figure 5 and although there were minimal significant differences between groups on an item level, there were no major differences that warranted the need for a control variable. The results of these tests are shown in Appendix B along with the description of how the group was split.

Table 6 shows the normality of the data collected per item of the construct. Note that Table 6 depicts the normality of the refined model. Since the acceptable limits of the skewness and kurtosis values are between -1.96 and +1.96 (George & Mallery, 2010), hence all values shown in Table 6 are acceptable. The skewness of the data is an indication of the distribution of the data and from information in Table 6, it can be seen that the data is negatively skewed and means that the preference of the sample is slightly to the right. The height of the peak of the data is revealed from the kurtosis with a positive value indicating a high peak and a negative indicating a flatter peak. From the data in Table 6, it can be seen that the data is fairly well balanced between negative and positive values indicating no discernable preference.

Table 6: Normality of each item measured in the study

Assessment of normality		
Variable	**skew**	**kurtosis**
BI1	-0.76	0,51
BI2	-0,34	-0,23
BI3	-0,71	0,07
BI4	-0,61	0,59
BI5	-0,79	-0,25
BI6	-0,67	0,35
BI7	-0,37	-0,09
BI8	-0,51	0,09
TST1	-0,21	-0,32
TST2	0,65	-0,73
TST3	-1,14	0,60
TST4	-0,34	-0,61
TST6	-0,17	-0,10
TST7	-0,23	-0,93
IWB1	-0,51	0,53
IWB2	-0,60	0,36
IWB3	-0,67	0,68
IWB4	-0,54	0,27
IWB6	-0,01	-0,41
IWB7	-0,33	-0,23
IWB8	-0,18	-0,34
IWB9	-0,62	-0,06

*BI = behavioural integrity, TST = Trust, IWB = Innovative work behaviour

5.4. Factor analysis checks

5.4.1. Validity

From the final measurement model (Figure 11), it can be seen that all factor loading are above 0.5 and this indicated convergent validity (Hair et al., 2014). Discriminant validity was checked by using the average variance extracted (AVE). Table 7 depicts the square root of the average variance extracted estimates and this must exceed the correlation amongst two latent variables to indicate discriminant validity. From Table 7, there was a concern regarding discriminant validity regarding the constructs of behavioural integrity and trust as the AVEs values of these constructs are lower than the correlation between these

two constructs. Therefore care should be taken during the evaluation of the results as these two constructs were statistically similar.

Table 7: Correlation and Square root of AVEs Matrix

	Behavioural integrity	Trust	Innovative work behaviour
Behavioural integrity	0,84		
Trust	0,90	0,71	
Innovative work behaviour	0,08	0,17	0,76

5.4.2. Reliability

The Cronbach alpha utilised as verification of how reliable the instruments were in this study. Table 13 depicts the Cronbach alphas of scales used for this sample and it can be ascertained that the reliability of all scales used is valid (Cronbach alpha greater than 0.70) (Hair et al., 2014).

Table 8: Reliability and validity assessment

Constructs		Factor loadings	P-value	Cronbach's Alpha	Composite reliability – ensure cronbach is more stable	AVE	Final number of items*
Behavioural integrity	BI1	0.78	0.00	0.95	0.95	0.70	8(8)
	BI2	0.85	0.00				
	BI3	0.86	0.00				
	BI4	0.82	0.00				
	BI5	0.88	0.00				
	BI6	0.80	0.00				
	BI7	0.86	0.00				
	BI8	0.86	0.00				
Trust	TST1	0.8	0.00	0.86	0.86	0.50	6(7)
	TST2	0.77	0.00				
	TST3	0.60	0.00				
	TST4	0.74	0.00				
	TST6	0.59	0.00				
	TST7	0.72	0.00				
Innovative work behaviour	IWB1	0.64	0.00	0.92	0.92	0.56	8(9)
	IWB2	0.73	0.00				
	IWB3	0.76	0.00				
	IWB4	0.81	0.00				
	IWB6	0.82	0.00				
	IWB7	0.84	0.00				
	IWB8	0.77	0.00				
	IWB9	0.69	0.00				

* Initial number of items in brackets

Furthermore, Table 9 makes a comparison of the Cronbach alpha figures from literature compared against the Cronbach alpha from the study and they are found to be fairly similar.

Table 9: Comparative Cronbach alpha values for behavioural integrity, trust and innovative work behaviour figures from literature versus current research

Construct	Cronbach alpha in this sample	Cronbach alpha literature
Behavioural integrity	0.95	0.89
Trust	0.86	0.84
Innovative work behaviour	0.92	0.95

Since all Cronbach alphas are above the 0.7 threshold and in addition, due to the Cronbach alphas being fairly similar to those reported in literature, the reliability of the scales used can be assured. Furthermore, during the literature review, the scales used were applied in some studies and the results regarding reliability were also acceptable (de Jong & den Hartog, 2010; Schoorman et al., 2007; Schuh et al., 2018).

5.5. Results for the relationship amongst behavioural integrity, trust and innovative work behaviour

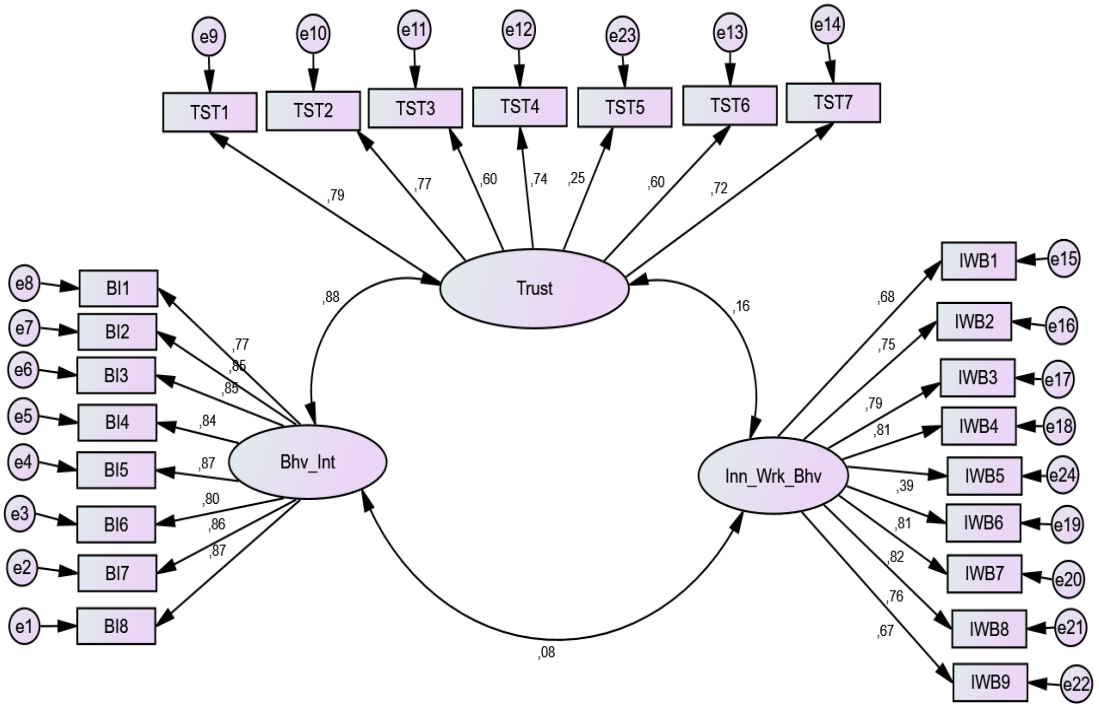

Figure 10: Figure showing the initial model (before refinement)

Table 10: The Chi-squared index for the initial model (before refinement)

Chi-squared (χ^2)	459.10
Degrees of freedom	249
Significance (p)	0.00

Although the Chi-squared is significant, Hair et al. (2014) advises that as the sample group increases, lower classification rates will still result in a significant Chi-squared indicator. The Chi-squared indicator could be used as normality was checked and verified (Hooper, Coughlan, & Mullen, 2008). The standardised residual covariance matrix suggested that some items (IWB2, TST3 and TST6) could be removed if the standardised residual covariance was greater than |2.5| to further improve the model (Hair et al., 2014). Using modification indices (Hair et al., 2014), an improvement could be made to the model by adding two inter-item correlations (BI4 and BI8, and IW1 and IW3). The refined model is presented in Figure 11 below.

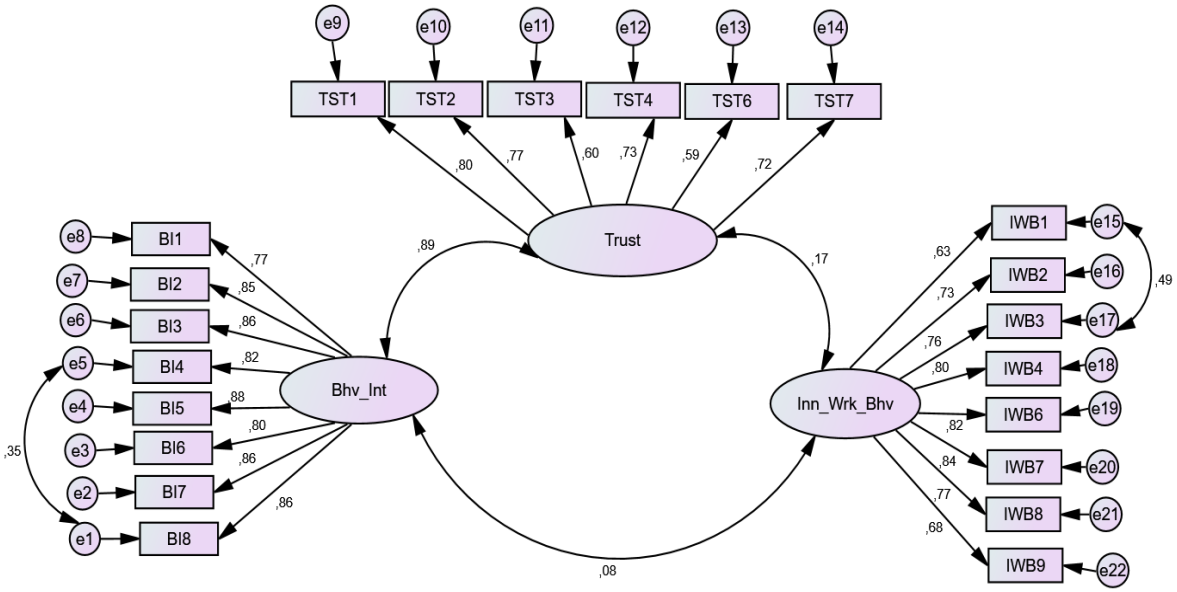

Figure 11: Final measurement model (after refinement)

The improved model (Table 11) showed a decreased Chi-squared value and was still significant thus implying an improved model over the initial model. The model fit metrics were utilised to determine the suitability of the model proposed with the final as well as initial values shown as a comparison below.

Table 11: The Chi-squared index for the final model (after refinement)

Chi-squared (χ^2)	350.00
Degrees of freedom	204
Significance (p)	0.00

According to Hair et al. (2014), a model's goodness of fit check should include the Chi-squared number along with degrees of freedom with the following:

- One absolute fit index (RMSEA)
- One incremental fit index (CFI, TLI)
- One goodness for fit index (CFI, TLI)
- One badness for fit index (RMSEA)

One of the most commonly used metric is the root mean square error of approximation (RMSEA) due to it resulting in a better approximate model fit to a population rather than to just a sample (Hair et al., 2014). The confidence level of the fit can also be specified and a 95 % confidence level was specified in the analysis. The RSMEA was acceptable for the final model (0.08).

From Table 12, five of the six model indices indicate a satisfactory fit of the final version of the model along with the criteria listed above from Hair et al. (2014) regarding the goodness for fit criteria and hence the final version of the model (Figure 11) is used going forward in the analysis.

Table 12: Model fit indices

Fit Indicator	Threshold	Initial measurement model	Final measurement model
CMIN/DF (Chi-square/degree of freedom)	Less than 3 (good) Between [3-5] (acceptable) Above 5 (bad) *	1.84	1.72
RMSEA (Root Mean Square Error of Approximation)	Between 0 to 0.08 (good) Above 0.08 (bad) **	0.08	0.08
NFI (Normed Fit Index)	Less than 0.80 (bad) Between [0.80-0.95] (acceptable) Above 0.95 (good) **	0.80	0.84
CFI (Comparative Fit Index)	Less than 0.90 (bad) Above 0.90 (good) *	0.89	0.92
TLI (Tucker Lewis Index)	Less than 0.80 (bad) Above 0.80 (acceptable) **	0.88	0.91
GFI (Goodness-Of-Fit-Index)	Less than 0.90 (bad) Above 0.90 (good) *	0.75	0.80

* Hair et al. (2014: 579-580)

** Hooper, Coughlan and Mullen (2008)

5.6. Hypothesis testing

From Table 11 and Table 12, that the final model as presented in Figure 11 is suitable for the evaluation of the hypotheses proposed in Chapter 3. Figure 13 shows a graphical representation of the regression results whilst Table 13 presents that data in a tabular form. In Figure 13, the latent variables are depicted with all items that contributed to the construct. The red line denotes the direct link amongst the constructs of behavioural integrity and innovative work behaviour whilst the blue line denotes the indirect relationship between behavioural integrity and innovative work behaviour with trust as the mediator. The multiple boxes next to the constructs are the items used to build that construct from the sample analysed with the numbers next to the boxes denoting the factor loading of the variables.

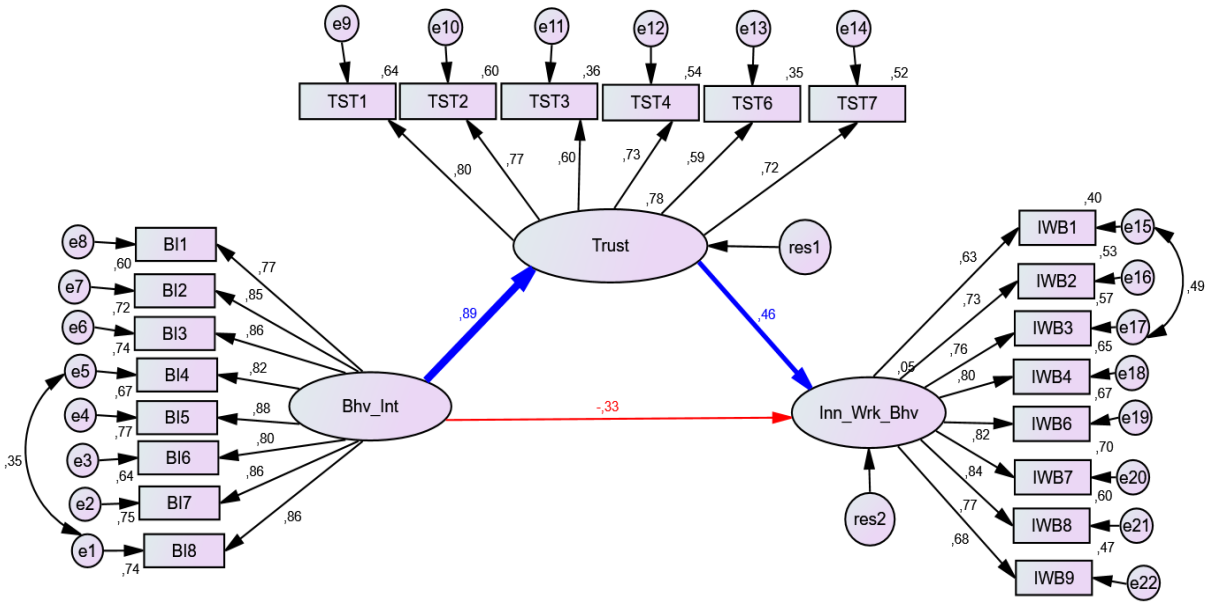

Figure 12: Hypotheses testing of structural model

Table 13: The regression weighting

Dependent variables		Independent variables	Estimate	P-value
Trust	←	Behavioural integrity	0.89	0.00
Innovation work behaviour	←	Trust	0.46	0.22
Innovation work behaviour	←	Behavioural integrity	-0.33	0.24

Only the link amongst behavioural integrity of the manager and employee trust in the manager show a positive and significant effect ($p<0.05$). The implication here is when behavioural integrity of manager's increases by one standard deviation, there is 99% chance that trust will increase by 0.89 standard deviation.

Employee trust does not have a significant effect on employee innovative work behaviour ($p>0.05$). This means that improving trust does not significantly affect innovative work behaviour of the employee.

Behavioural integrity of managers does not have a significant effect on employee innovative work behaviour ($p > 0.05$). This implies that improving behavioural integrity does not significantly affect innovative work behaviour in the employee.

5.6.1. Research question one

Does behavioural integrity of managers positively predicts employees trust?

Hypothesis one

H_0^1: Behavioural integrity of managers does not positively predict employees trust

H_1^1: Behavioural integrity of managers positively predict employees trust

From Table 13, there is statistical support that behavioural integrity of managers positively and significantly ($p < 0.05$) predicted employees trust.

Thus the null hypothesis is rejected.

5.6.2. Research question two

Does employees trust positively predicts innovative work behaviour of employees?

Hypothesis two:

H_0^2: Employee trust does not positively predict innovative work behaviour of employees.

H_1^2: Employee trust positively predict innovative work behaviour of employees.

From Table 13, there no statistical support that employee trust positively and significantly ($p > 0.05$) predicted innovative work behaviour of employees.

Thus the null hypothesis is accepted in favour of the alternate hypothesis.

5.6.3. Research question three

Does behavioural integrity of managers positively predicts and innovative work behaviour of employees?

Hypothesis three:

H_0^3: Behavioural integrity of managers does not positively predicts innovative work behaviour of employees.

H_1^3: Behavioural integrity of managers does not positively predicts innovative work behaviour of employees.

From Table 13, there no statistical support that behavioural integrity positively and significantly ($p > 0.05$) predicted innovative work behaviour of employees.

Thus the null hypothesis is accepted in favour of the alternate hypothesis.

5.7. Conclusion

Chapter 5 summarises the statistical outcome of the demographic, descriptive and inferential tests of the sample regarding the constructs of behavioural integrity, trust and innovative work behaviour. In Chapter 6, these results are interpreted, discussed and conclusions are drawn with the intention of highlighting the prominence of the constructs of behavioural integrity, trust and innovative work behaviour with regards to business and

theoretical implications in Chapter 7. Supplementary information regarding the statistics are presented in Appendix B and C at the end of the report.

6. Discussion of results

6.1. Introduction

In Chapter 6, the findings from the statistical analyses are discussed, by addressing the hypotheses in Chapter 3. The discussion is directed by the literature review from Chapter 2 and sets a platform for Chapter 7 where the implications to business and literature are discussed.

6.2. Discussion of demographic and descriptive statistics

From the literature review, there was only an indication of the relationship amongst behavioural integrity and trust whilst nothing in terms of innovative work behaviour. The study therefore is a novel research angle that is studied and the findings of this study must be considered within its limitations of a relatively small sample size ((Beavers, Lounsbury, Richards, Huck, Skolits, & Esquivel, 2013; Costello & Osborne, 2005; Hair et al., 2014). Some model fit indices are directly affected by sample size such as the Chi-squared number (hence the use of the relative Chi-squared number which reduces effect of sample size), the Goodness for fit and Normed fit index. It should be noted that Comparative fit indices and Tucker-Lewis indices, indices which are less dependent on the size of the sample, did indicate a good model fit however care should still be exercised in drawing universal conclusions from the study.

In section 5.2 and 5.3, the demographic and descriptive statistics were presented respectively. A concern that was noticed with the sample was the high percentage (37%) of respondents who were reporting to their manager for one year or less. This indicates a high turnover or movement of personnel (employee and/or manager) within the business units sampled. As mentioned in section 2.6.2.3., no information pertaining to an effect of tenure on the relationship amid manager and employee on the effect amongst behavioural integrity and innovative work behaviour could be found as well as no statistically significant differences noted from the T-tests between persons with less than one year tenure with their manager and the rest of the group.

An element of a leader-member exchange is integrity (Brower, Schoorman, & Tan, 2000; Mayer et al., 1995) and since the most apt description of integrity is behavioural integrity

(Krylova et al., 2017; Simons et al., 2015; Tomlinson et al., 2014), it was postulated that behavioural integrity will have similar outcomes as leader-member exchange studies.

From leader-member exchange theory (LMX), it was expected that an increase in the length of the relationship would have had a progressive influence on the interaction among behavioural integrity and innovative work behaviour. This is guided by studies that have shown that a heightened level of leader-member interactions relates to a proliferation in innovative work behaviour (Carnevale et al., 2017; Scott & Bruce, 1994; Sin et al., 2009; Wang et al., 2015; Yuan & Woodman, 2010). The reason why leader-member exchange exhibits a positive influence on innovative work behaviour is due the belief that the employee has that their leader will generally use their networks to support their innovative efforts (Wang et al., 2013) and reduces the potential risk associated with the innovative effort (Yuan & Woodman, 2010).

Sin et al. (2009) has shown that as the duration of interaction amid employee and leader increases, the quality of the leader-member exchange interaction increases. By having less than a year working relationship with their manager, the employee may not have built up enough history or evidence to judge their manager's behavioural integrity. Since behavioural integrity is an ascribed trait (Simons et al., 2015; Way et al., 2018), this lack of time to establish the relationship and ensure consistency of word to deed actions may not have been sufficient to give an adequate analysis of their leader's behavioural integrity and therefore the outcomes of this paper need to be analysed with care. However from the study conducted in Singapore by Lee (2008), it was found that leader member exchange quality did not influence innovative work behaviour and from the results observed in chapter 5, behavioural integrity did not predict innovative work behaviour as well.

Predominantly a number of projects conducted in the chemicals and energy sector are multi-year projects. This implies that the incumbent must be involved in all stages of the project from concept through to execution which is unlikely from the sample given the large number of personnel who have been with their manager for one year or less.

A further point of interest concerning the education qualifications of the respondents is that the proportion of Bachelors degree respondents to Masters degree respondents were two is to one. However when consulting the human resources department to verify this finding,

it was revealed that a more representative figure for these business units is ten is to one. This implies that fewer Bachelors degree respondents answered the survey than was required to make it a representative sample. From the T-tests conducted, there were only a few minor statistically significant differences between these groups of individuals recorded. However, the misrepresented ratio in the sample could have an influence on the outcomes of the results presented. In Singapore by Lee (2008), it was shown that highly educated people are more independent, and have the confidence and professional skills to drive their own innovative behaviour.

The statistics of the sample in terms of gender were 14 males for every 10 females. After consultation with the human resources department, it was discovered that the statistics for the population is 15 males to every 10 females so the sample was fairly representative in terms of gender. Gender was a concern as it was found by Pecis (2016) and Williams et al. (2014) that females are at a potential disadvantage with respect to innovative work behaviour and have to approach their efforts to be innovative differently from their male counterparts. It was expected that in the chemical industry and especially within South African industry, where it has been historically dominated by males, females would face a challenge to execute their innovative efforts. From the T-tests, there was only a few menial statistical differences noted between males and females and this was deemed not to affect any of the results of the study from a gender perspective.

With regards to the years of experience, it was found that a large proportion of the sample (27%) had less than five years' experience with 74% having 15 years or less experience. Age was also measured and it was found that the sample showed the largest spread between the ages of 30 to 39 (37%). It was anticipated that younger employees in the chemical industry will be less innovative as it is a highly specialised industry and requires some practical knowledge of their field before becoming effective in innovative work behaviour. Frosch (2011), found that in the engineering sector, employees generally showed their greatest innovative work behaviour in their mid to late forties. During sampling, it was found that there was 25% of the sample that fell into the optimum innovative behaviour age group. When conducting tests for differences between the mid to late forties group and the other groups, there were no observed statistically significant differences.

The chemicals sector in South Africa is cyclic in nature (Republic of South Africa: Department of Trade and Industry). The current state of the industry and the company was in an optimisation phase or exploitative innovation during this study (Manso, 2017; O'Reilly & Tushman, 2013). This implies that the employees may not be encouraged to be innovative or explorative but rather exploitative. Manso (2017) explains that during the exploitative phase, good quarterly returns are still required and managers may avoid risk-taking thus deterring innovative work behaviour from employees.

6.3. Research question one

Does behavioural integrity of managers positively predicts employees trust?

Research question one investigated if there was a predictive relationship amongst behavioural integrity of managers and employees trust. From the outcomes of the regression analysis (Table 13) depict that at a 95% confidence interval, there is a predictive effect among behavioural integrity and trust. This confirmation of the positive and significant relationship shows consistency with literature (Colquitt et al., 2007; Hinkin & Schriesheim, 2015; Kannan-Narasimhan & Lawrence, 2012; Mayer et al., 1995; Simons, 2002; Simons et al., 2015). Friedman et al. (2018) also showed that behavioural integrity and trust resulted in similar reactions across different cultures.

From Mayer et al. (1995) trust description put forth in chapter 2, it was posited that behavioural integrity would one of the antecedents to trust (Kannan-Narasimhan & Lawrence, 2012; Simons, 2002). Behavioural integrity supports this statement by being the word to deed alignment thereby rendering predictability of the person observed and giving more certainty to the "expectation" that a particular action will be performed.

Behavioural integrity is an ascribed trait, it is dependent on the eye of the observer (Simons, 2002). It is also worth noting that behavioural integrity is consistency of word to deed action over time and across different situations. Friedman et al. (2018) posited that in countries with high power distances (as in South Africa), the inconsistencies in word to deed action could be more readily forgiven.

Robbins and Judge (2015) discuss three influences that can affect perception viz. factors in the observer (biases), factors in the observed and factors in the environment. It could be argued that there was insufficient time for respondents who were with their managers for less than one year to judge behavioural integrity of their manager in its entirety (Martin et al., 2016). It could also be argued that people who are starting a job or starting a new job rely very heavily on and trust their manager for goal setting and for guidance as the employee is still learning to operate within that environment.

It is important to appreciate that this questionnaire was distributed a month before the release of the yearly increases for the company and hence the employee's may ascribe a more favourable and trusting attribute to their manager. It is noteworthy that one of the business units in the questionnaire was undergoing an organisational change during the study. This is interesting as according to Simons (2002), during times of organisational change, there is more opportunity to have breaches in behavioural integrity and hence behavioural integrity is lower during times of change than during stable times. However during the survey, a high level of behavioural integrity was observed.

It was however interesting to note that although the result is in accordance with literature, how the result was achieved was different. To further explain, from the responses to this study, trust cross loaded and split between the behavioural integrity component and the trust component in the rotated component matrix (Table 18). Factor 3 was chosen as trust as it loaded greater on four items and from Beavers et al. 2013, four or more items can constitute a component. From Table 7, there was a discriminant validity concern. Discriminant validity implies that the responses to the scales used for behavioural integrity and trust showed that these items for these constructs measure very closely. This is very different from previous studies where behavioural integrity and trust are discussed as two separate components (Friedman et al., 2018; Kannan-Naramsimhan & Lawrence, 2012; Krylova et al., 2017; Mayer et al., 1995). Taking the above information into account, it is proposed that the scales used to measure behavioural integrity and trust should be relooked at and the study conducted without a discriminant validity concern.

6.4. Research question two

Does employees trust positively predicts innovative work behaviour of employees?

From literature, the most relevant meaning of trust for this study was that of Mayer et al. (1995) (Agarwal, 2013; Frazier et al., 2016; Kannan-Narasimhan & Lawrence, 2012; Sue-Chan et al., 2012). As innovation is related to risk taking (Manso, 2011, 2017) which in turn is related to trust (Neves & Eisenberger ,2013), it was expected that employee trust in manager will positively predict innovative work behaviour in employees.

From a study of scientists, engineers and technicians in conducted at a US research and development facility, a positive correlation between employee trust in their manager and their innovative work behaviour was observed (Scott & Bruce, 1994). This view is supported by Yuan and Woodman (2010) in their study of various technical and manufacturing industries in the US.

However from the results presented in section 5.6.2, it was observed that employee trust did not predict innovative work behaviour in this study. This result was contrary to what was seen in previous studies on technical individuals. This implies that in South Africa, employee innovative work behaviour is not positively influenced by employee trust in their manager.

This could be possibly due to the nature of the job as discussed in section 2.6.2.5, where the innovative job requirement positively influenced the innovative work behaviour of employees. Currently the energy and chemicals sector, the industry is going through a difficult period and there are a number of organisational exercises being conducted to conserve costs. This could lead to less investment in new ideas and more exploitative work to make full use of installed capacity. In general, investment in the chemicals sector is also very capital and time (duration) intensive, and require a multitude of resources across multiple fields (both internally and externally of the company). This could affect the propensity for the innovative ability of an employee and the trust in their manager as it may seem that their manager cannot influence and drive organisational support for this innovative idea. It seems that the explanation was somewhat validated from the data in Table 4 where it is noticed that the idea generation has a much lower “Rarely” rating than the idea promotion or realisation stage. It should also be highlighted that the majority of respondents had a relatively short amount of working experience and due to the hierarchical nature of the business units, they would most likely report to low level managers who they

do not believe have sufficient organisational influence to support their innovative work behaviours.

Another point to consider was that there was a very high ratio of Doctoral respondents to Masters employees (more so than the ratio for the sample) and this could skew the results as discussed in section 6.1. This could be an effect as highly educated individuals may have sufficient confidence and trust in their ability to drive an innovative process that they do not need the support of their manager. This was the conclusion from a study regarding leader-member exchange and innovative work behaviour by Lee (2008) and it could possibly be that a similar situation was observed in the current sample.

6.5. Research question three

Does behavioural integrity of managers positively predicts innovative work behaviour of employees?

From the literature review, no direct relationship between behavioural integrity and innovative work behaviour could be found. The closest study that could be likened to what was undertaken in this study was from Palanski and Vogelgesang (2011) where they studied the interaction of behavioural integrity on follower creativity. In this study, they observed a positive link between behavioural integrity and innovative work behaviour (Palanski & Vogelgesang, 2011). The effect amongst manager behavioural integrity and employee innovative work behaviour could possibly be explained through leader-member exchange theory (Dansereau et al., 1975) as leadership plays critical parts in advancing innovation (O'Cass & Sok, 2013). An attribute required for good leader-member interactions is integrity (Brower, Schoorman, & Tan, 2000; Mayer et al., 1995). From theory, a widely accepted definition of integrity is behavioural integrity (Krylova et al., 2017; Simons et al., 2015; Tomlinson et al., 2014). Since there is literature on the positive and significant relationship between leader-member exchange (LMX) and employee innovative work behaviour (Schuh et al., 2018; Scott & Bruce, 1994), it was reasoned that there should be a positive predicative association amongst behavioural integrity of the manager and employee innovative work behaviour. Furthermore, from literature (Colquitt et al., 2007; Hinkin & Schriesheim, 2015), it was found that trust was a partial mediator in relationships between behavioural integrity and many other important organisational outcomes and

hence there was an expectation of a relationship between manager behavioural integrity and employee innovative work behaviour.

However this was not the case as seen from the results presented in section 5.6.3. This leads to a somewhat surprising result in that there was no significant predication amongst manager behavioural integrity and employee innovative work behaviour since South Africa has been rated at 58th in the world from the Global Innovation Index 2018 (Dutta et al., 2018) so innovation is an important aspect of South African business. This result may be rationalised by the current phase of the life cycle of the energy and chemicals company (Danvila-de-Valle et al., 2018) where it is a cyclic industry and is currently in a consolidation phase. Furthermore, one business unit in the study started undergoing a restructuring exercise just prior to the survey being administered and this could possibly have some weighting with respect to any relationship amongst behavioural integrity of managers and innovative work behaviour of subordinates. This could be explained as innovation requires a form of risk taking on the part of the employee and it could be that, at this point in this the company's transition, the employee does not understand how the manager may act with regards to supporting innovative work behaviour on their part (Amabile & Pratt, 2016; Manso, 2017; Schoorman et al., 2007).

6.6. Conclusion

The outcomes from the research show that behavioural integrity of managers is a robust predictor to employee trust. Furthermore, the study also revealed that there was no evidence to support that employee trust predicted employee innovative behaviour. Lastly, there was also no evidence to prove that behavioural integrity of the manager predicted employee innovative work behaviour.

In addition, trust has been widely recognised as a central antecedent or outcome of organisational studies (Simons, 2002). Trust is an important construct to be considered with behavioural integrity and was found to be a partial mediator in many important organisational outcomes (Kannan-Narasimhan & Lawrence, 2012; Palanksi & Yammarino, 2011; Simons, 2002, Simons et al., 2015). In a study where different mediators between behavioural integrity and job performance, trust showed the biggest mediating amongst between these constructs (Martin et al., 2016). From the results presented, it can be seen that there was no mediation effect due to there being no indirect effect of behavioural

integrity and innovative work behaviour (Baron & Kenny, 1986; MacKinnon et al., 2007; Zhao et al., 2010).

This chapter discussed the outcomes revealed in the previous chapter within the structure of research objectives defined in chapter 3. This discussion was centred on the literature review undertaken in the second chapter where any anticipated relationship was presented along with the difference between the results observed from the study. These results were then discussed in more detail to present a case for the results received and how the context of the study could have affected the outcomes.

7. Conclusion

7.1. Introduction

In chapter 7, key theoretical and business implications are proposed. The shortcomings of the study was also highlighted along with possible suggestions of future research. A summary of the report is then presented along with the references.

7.2. Principal findings

In previous chapters, the argument for encouraging innovation was promoted and there is good agreement that innovation is critical for businesses in today's economic environment. With current leadership failures, behavioural integrity is also an important leadership trait to advance and practice. The intent of incorporating these constructs, along with trust, was an attempt to determine if behavioural integrity could promote innovative work behaviour of employees thus leading to a competitive advantage of innovation through leadership.

The major theoretical finding from the study that was in agreement with literature was that behavioural integrity and trust are strongly correlated. This implies that behavioural integrity of managers are an important antecedent to employee trust in the manager in South Africa. Another major theoretical implication observed was that there was no evidence from the study that employee trust in the manager predicted employee innovative work behaviour in South Africa. This is against what was predicted from previous studies in the literature review. This is an interesting observation however the limitations with regards the discrepancy in response ratio of level of education, could have possibly skewed the results.

The final theoretical implication was the there was no proof of a positive or significant relationship (either direct or indirect via trust) between manager behavioural integrity and employee innovative work behaviour. This is an interesting observation from the statistical outcomes of the research as although evidence of this relationship exists in literature, the argument was advanced in previous chapters of the expected relationship between manager behavioural integrity and employee innovative work behaviour. Since this relationship does not hold true, there should be further investigations into the leadership

antecedents of employee innovative work behaviour in the interest of promoting innovation through leadership.

Another theoretical outcome that requires further investigation was the large cross loading of items between behavioural integrity and trust when performing the factor analysis. This implies that the respondents treated these concepts as very similar although it is specifically stipulated in literature that behavioural integrity and trust are two separate constructs (Hinkin & Schriesheim, 2015). An additional interesting theoretical finding with regards to trust was that trust was found to be a partial mediator between behavioural integrity and other important organisational outcomes in previous studies (Kannan-Narasimhan & Lawrence, 2012; Palanksi & Yammarino, 2011; Simons, 2002, Simons et al., 2015) however this was not observed in this study.

7.3. Implications for management

From a management viewpoint, it is key to take cognisance with regards to behavioural integrity of managers being an vital antecedent to employee trust in the South African context. There are many studies linking the positive effect that behavioural integrity can have on other important organisational outcomes (organisational citizenship behaviour, employee performance, lower intention to turnover, lower stress) and since there is such a strong relationship observed during this study, it would be prudent for leadership to take cognisance of the effect they can have on cultivating trust in their leadership with their employees. It has also been shown that in some cases, behavioural integrity can have a much bigger effect than the psychological contract breach (Simons et al., 2015) and hence should be understood.

Furthermore, the reasons as to why employee innovative work behaviour was not predicted by employee trust in manager, as shown in previous studies in literature, needs to be investigated further to determine if there are other contributing factors that may not have been considered in this study. From literature, it was concluded by Lee (2008) that highly qualified individuals do not necessarily require manager support to proceed with their innovative work behaviours and this was assumed to have influenced the outcome of this study. With this, management will know how to position leaders within an organisation to ensure the highest support for innovative work behaviours.

The investigation into the antecedents to employee innovative work behaviour is a critical undertaking for organisations and it can be used to help structure systems to encourage and support innovation of employees. Since behavioural integrity is an ascribed trait, the respondents could be subject to biases such as attribution bias or anchoring bias regarding their manager's behaviours. This is an issue inherent in self-reported scales as mentioned by Hendrik, Fischer, Tobi and Frewer (2013).

7.4. Limitations of the research

This current research did not take into account the structure of the business as one of the business units surveyed uses a matrix structure with dual reporting lines and the questions in the questionnaire did not direct respondents as to who to evaluate. The sample size was also considered on the lower side for the study (Hair et al., 2014) so care must be exercised when extrapolating the results. Along with this, the response rate was considered low according to literature (Baruch & Holtom, 2008) which could also lead to possible skew results.

The amount of employees who reported to their manager for less than a year was also a concern for the study however the analysis was not redone whilst controlling for tenure with current manager as it would result in too small a sample size to come to any statistically correct solution. When following up on the group statistics with the human resources department in the business units that were sampled, it was found that the actual ratio of Bachelors to Masters employees was closer to 10:1 rather than the ratio achieved in the sample (2:1). This could lead to a likely impact on the study as Lee (2008) revealed in a study that the more qualified individuals did not necessarily require manager support as they possessed the necessary skill and confidence to go forth with their own innovative work behaviours. It is presumed that the high rate of response from Masters employees are that these employees have had to conduct studies before and understand the importance of participating in the survey.

Work in the energy and chemicals sector generally require a lot of resources in terms of time, multi-disciplinary support and money to have an idea manifest into realised project. Persons with a low number of years of experience may not have necessarily been through

a project cycle and have not experienced the idea promotion or idea realisation phases of the innovative work behaviour process.

It should also be noted that the energy and chemicals sector as well as many other sectors in South Africa are currently going through optimisation processes where look to utilise resources most efficiently and as a lot of new ideas may not see the implementation phases, employees and managers may be focused on current asset utilisation through exploitation rather than exploration (innovation).

7.5. Future research

A recommendation for further investigation is to perform this research in a different context within South African business by evaluating a different industry. It is also endorsed that this research also be piloted across different countries to evaluate if the research questions result in different outcomes. An additional construct that could be included into the study is that of risk in terms of propensity for risk. This is due to risk being related to both trust and innovative work behaviour and hence should provide more information on the mechanism of innovation. Another study to comprehend antecedents of employee innovative work behaviour in South Africa is advised so that South African businesses can facilitate innovation and gain a competitive advantage. A study similar to this could also be conducted, akin to Basu and Green (1997), to evaluate if leadership styles can have an influence on employee innovative work behaviour.

7.6. Conclusion

This study was commissioned to contribute to research on behavioural integrity by introducing the developing notion of innovative work behaviour as part of a growing list of important organisational outcomes of behavioural integrity. Managers should note that behavioural integrity does predict trust which lead to a host of important organisational behaviours. It was observed in this study that there was no proof that employee trust in the manager predicts employee innovative work behaviour which was contrary to literature.

Innovative work behaviour is a critical attribute of any business in the current business environment and hence all efforts to foster innovation should be understood and promoted.

Since there was no indication that behavioural integrity predicted innovative work behaviour within the limitations of the study, further studies into which leadership traits can increase innovative work behaviour should be commissioned.

7.7. References

Agarwal, U. (2014). Linking justice, trust and innovative work behaviour to work engagement. *Personnel Review, 43*(1), 41-73.

Alfes, K., Truss, C., Soane, E. C., Rees, C., & Gatenby, M. (2013). The relationship between line manager behavior, perceived HRM practices, and individual performance: Examining the mediating role of engagement. *Human resource management, 52*(6), 839-859.

Amabile, T. M., & Pratt, M. G. (2016). The dynamic componential model of creativity and innovation in organizations: Making progress, making meaning. *Research in Organizational Behavior, 36,* 157-183.

Audenaert, M., Vanderstraeten, A., & Buyens, D. (2017). When innovation requirements empower individual innovation: the role of job complexity. *Personnel Review*, *46*(3), 608-623.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, *51*(6), 1173.

Baruch, Y., & Holtom, B. C. (2008). Survey response rate levels and trends in organizational research. *Human relations*, *61*(8), 1139-1160.

Bauer, M., & Leker, J. (2013). Exploration and exploitation in product and process innovation in the chemical industry. *R&D Management, 43*(3), 196-212.

Binnewies, C., Ohly, S., & Niessen, C. (2008). Age and creativity at work: The interplay between job resources, age and idea creativity. *Journal of Managerial Psychology*, *23*(4), 438-457.

Brower, H. H., Schoorman, F. D., & Tan, H. H. (2000). A model of relational leadership: The integration of trust and leader–member exchange. *The Leadership Quarterly*, *11*(2), 227-250.

Carnevale, J. B., Huang, L., Crede, M., Harms, P., & Uhl-Bien, M. (2017). Leading to Stimulate Employees' Ideas: A Quantitative Review of Leader–member Exchange, Employee Voice, Creativity, and Innovative Behavior. *Applied Psychology*, *66*(4), 517-552.

Carrasco, I. (2014). Gender gap in innovation: an institutionalist explanation. *Management Decision*, *52*(2), 410-424.

Chen, Z., Lam, W., & Zhong, J. A. (2012). Effects of perceptions on LMX and work performance: Effects of supervisors' perception of subordinates' emotional intelligence and subordinates' perception of trust in the supervisor on LMX and, consequently, performance. *Asia Pacific journal of management*, *29*(3), 597-616.

Cheng, C. Y., Jiang, D. Y., Cheng, B. S., Riley, J. H., & Jen, C. K. (2015). When do subordinates commit to their supervisors? Different effects of perceived supervisor integrity and support on Chinese and American employees. *The Leadership Quarterly*, *26*(1), 81-97.

Colquitt, J. A., & Rodell, J. B. (2011). Justice, trust, and trustworthiness: A longitudinal analysis integrating three theoretical perspectives. *Academy of Management Journal*, *54*(6), 1183-1206.

Colquitt, J. A., Scott, B. A., & LePine, J. A. (2007). Trust, trustworthiness, and trust propensity: a meta-analytic test of their unique relationships with risk taking and job performance. *Journal of applied psychology, 92*(4), 909.

Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical assessment, research & evaluation*, *10*(7), 1-9.

Dansereau Jr, F., Graen, G., & Haga, W. J. (1975). A vertical dyad linkage approach to leadership within formal organizations: A longitudinal investigation of the role making process. *Organizational behavior and human performance*, *13*(1), 46-78.

De Jong, J., & Den Hartog, D. (2010). Measuring innovative work behaviour. *Creativity and Innovation Management, 19(*1), 23-36.

Danvila-del-Valle, I., Lara, F. J., Marroquín-Tovar, E., & Zegarra Saldaña, P. E. (2018). How innovation climate drives management styles in each stage of the organization lifecycle: The human dimension at recruitment process. *Management Decision*.

Dineen, B. R., Lewicki, R. J., & Tomlinson, E. C. (2006). Supervisory guidance and behavioral integrity: Relationships with employee citizenship and deviant behavior. *Journal of Applied Psychology*, *91*, 622-635.

Dinh, J. E., Lord, R. G., Gardner, W. L., Meuser, J. D., Liden, R. C., & Hu, J. (2014). Leadership theory and research in the new millennium: Current theoretical trends and changing perspectives. *The Leadership Quarterly*, *25*(1), 36-62.

Doughtie, L. (2016). Now or never: CEOs mobilize for the fourth industrial revolution. *KPMG report.*

Dutta, S., Lanvin, B., & Wunsch-Vincent, S. (2018). THE GLOBAL INNOVATION INDEX 2018: ENERGIZING THE WORLD WITH INNOVATION. *GLOBAL INNOVATION INDEX 2018*, 1.

Frazier, M. L., Tupper, C., & Fainshmidt, S. (2016). The path (s) to employee trust in direct supervisor in nascent and established relationships: A fuzzy set analysis. *Journal of Organizational Behavior*, *37*(7), 1023-1043.

Friedman, R., Hong, Y. Y., Simons, T., Chi, S. C., Oh, S. H., & Lachowicz, M. (2018). The Impact of Culture on Reactions to Promise Breaches: Differences Between East and West in Behavioral Integrity Perceptions. *Group & Organization Management, 43*(2), 273-315.

Fritz, J. H., O'Neil, N. B., Popp, A. M., Williams, C., & Arnett, R. C. (2013). The influence of supervisory behavioral integrity on intent to comply with organizational ethical standards and organizational commitment. *Journal of business ethics*, *114*(2), 251-263.

Frosch, K. H. (2011). Workforce age and innovation: a literature survey. *International journal of management reviews*, *13*(4), 414-430.

Fulmer, C. A., & Ostroff, C. (2017). Trust in direct leaders and top leaders: A trickle-up model. *Journal of Applied Psychology, 102*(4), 648.

George, D., & Mallery, M. (2010). *SPSS for Windows Step by Step: A Simple Guide and Reference* (10thed.). Boston, MA: Pearson.

Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The leadership quarterly*, *6*(2), 219-247.

Greenbaum, R. L., Mawritz, M. B., & Piccolo, R. F. (2015). When leaders fail to "Walk the Talk" supervisor undermining and perceptions of leader hypocrisy. *Journal of Management, 41*(3), 929-956.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). Exploratory factor analysis. *Multivariate data analysis* (7th Ed). Edinburgh Gate: Pearson

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, *19*(2), 139-152.

Hendrick, T. A., Fischer, A. R., Tobi, H., & Frewer, L. J. (2013). Self-reported attitude scales: current practice in adequate assessment of reliability, validity, and dimensionality. *Journal of Applied Social Psychology*, *43*(7), 1538-1552.

Hernandez, M., Long, C. P., & Sitkin, S. B. (2014). Cultivating follower trust: are all leader behaviors equally influential?. *Organization Studies, 35*(12), 1867-1892.

Hinkin, T. R., & Schriesheim, C. A. (2015). Leader reinforcement, behavioral integrity, and subordinate outcomes: A social exchange approach. *The Leadership Quarterly*, *26*(6), 991-1004.

Hooper, D., Coughlan, J., & Mullen, M. (2008). Structural equation modelling: Guidelines for determining model fit. *Articles*, 2.

Hornsby, J. S., Kuratko, D. F., & Montagno, R. V. (1999). Perception of internal factors for corporate entrepreneurship: A comparison of Canadian and US managers. *Entrepreneurship Theory and Practice, 24*(2), 9-24.

Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour. *Journal of Occupational and organizational psychology*, *73*(3), 287-302.

Janssen, O., Van de Vliert, E., & West, M. (2004). The bright and dark sides of individual and group innovation: A special issue introduction. *Journal of Organizational Behavior*, *25*(2), 129-145.

Janssen, O., & Van Yperen, N. W. (2004). Employees' goal orientations, the quality of leader-member exchange, and the outcomes of job performance and job satisfaction. *Academy of management journal, 47*(3), 368-384.

Jaruzelski, B., Staack, V., & Chwalik, R. (2017). Will stronger borders weaken innovation? *Strategy+ Business, 89*. Retrieved from https://www.strategy-business.com/feature/Will-Stronger-Borders-Weaken-Innovation?gko=848b0

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of management journal*, *33*(4), 692-724.

Kannan-Narasimhan, R., & Lawrence, B. S. (2012). Behavioral integrity: How leader referents and trust matter to workplace outcomes. *Journal of business ethics, 111*(2), 165-178.

Kele, T. (2018).*Business Analysis and Research Methodology Session1,2,3 class notes.*

Kistan, K. (2018). *Investigating the mediating effect of coaching between authentic leadership and engagement – BARM assignment*

Koen, P. A., Ajamian, G. M., Boyce, S., Clamen, A., Fisher, E., Fountoulakis, S., Johnson, A., Puri, P., & Seibert, R. (2002). Fuzzy front end: effective methods, tools, and techniques. Wiley, New York, NY.

Kramer, R. M. (1999). Trust and distrust in organizations: Emerging perspectives, enduring questions. *Annual review of psychology*, *50*(1), 569-598.

Krylova, K. O., Jolly, P. M., & Phillips, J. S. (2017). Followers' moral judgments and leaders' integrity-based transgressions: A synthesis of literatures. *The Leadership Quarterly, 28*(1), 195-209.

Lee, J. (2008). Effects of leadership and leader-member exchange on innovativeness. *Journal of managerial psychology, 23*(6), 670-687.

Lee, G., & Teo, A. (2005). Organizational restructuring: Impact on trust and work satisfaction. *Asia Pacific Journal of Management*, *22*(1), 23-39.

Leroy, H., Dierynck, B., Anseel, F., Simons, T., Halbesleben, J. R. B., McCaughey, D., Savage G. T., & Sels, L. (2012). Behavioral integrity for safety, priority of safety, psychological safety, and patient safety: A team-level study. *Journal of Applied Psychology*, *97*, 1273-1281.

Lukes, M., & Stephan, U. (2017). Measuring employee innovation: a review of existing scales and the development of the innovative behavior and innovation support inventories across cultures. *International Journal of Entrepreneurial Behavior & Research, 23(*1), 136-158.

MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annu. Rev. Psychol.*, *58*, 593-614.

Madjar, N., Greenberg, E., & Chen, Z. (2011). Factors for radical creativity, incremental creativity, and routine, noncreative performance. *Journal of applied psychology, 96*(4), 730.

Manso, G. (2011). Motivating innovation. *The Journal of Finance*, *66*(5), 1823-1860.

Manso, G. (2017). Creating incentives for innovation. *California Management Review, 60*(1), 18-32.

Martin, R., Guillaume, Y., Thomas, G., Lee, A., & Epitropaki, O. (2016). Leader–member exchange (LMX) and performance: A meta-analytic review. *Personnel Psychology, 69(*1), 67-121.

Mayer, D. M., Kuenzi, M., Greenbaum, R., Bardes, M., & Salvador, R. B. (2009). How low does ethical leadership flow? Test of a trickle-down model. *Organizational behavior and human decision processes*, *108*(1), 1-13.

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of management review*, *20*(3), 709-734.

Memon, M. A., Cheah, J., Ramayah, T., Ting, H., & Chuah, F. (2018). Mediation Analysis Issues and Recommendations. *Journal of Applied Structural Equation Modeling*, *2*(1).

Moutinho, L., & Hutcheson, G. D. (2011). *The SAGE dictionary of quantitative management research*. Sage Publications. http://dx.doi.org.uplib.idm.oclc.org/10.4135/9781446251119.n20

Mumford, M. D., & Licuanan, B. (2004). Leading for innovation: Conclusions, issues, and directions. *The leadership quarterly*, *15*(1), 163-171.

Ng, T. W., & Feldman, D. C. (2010). Organizational tenure and job performance. *Journal of Management*, *36*(5), 1220-1250.

Ng, T. W., & Feldman, D. C. (2013). A meta-analysis of the relationships of age and tenure with innovation-related behaviour. *Journal of occupational and organizational psychology, 86*(4), 585-616.

Neves, P., & Eisenberger, R. (2014). Perceived organizational support and risk taking. *Journal of managerial psychology*, *29*(2), 187-205.

O'Cass, A., & Sok, P. (2013). Exploring innovation driven value creation in B2B service firms: The roles of the manager, employees, and customers in value creation. *Journal of Business Research, 66*(8), 1074-1084.

O'Reilly, C. A., & Tushman, M. L. (2013). Organizational ambidexterity: Past, present, and future. *Academy of management Perspectives, 27*(4), 324-338.

Palanski, M. E., Cullen, K. L., Gentry, W. A., & Nichols, C. M. (2015). Virtuous leadership: Exploring the effects of leader courage and behavioral integrity on leader performance and image. *Journal of Business Ethics*, *132*(2), 297-310.

Palanski, M. E., & Vogelgesang, G. R. (2011). Virtuous creativity: The effects of leader behavioural integrity on follower creative thinking and risk taking. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, *28*(3), 259-269.

Palanski, M. E., & Yammarino, F. J. (2007). Integrity and Leadership: Clearing the Conceptual Confusion. *European Management Journal, 25*(3), 171-184.

Palanski, M. E., & Yammarino, F. J. (2009). Integrity and leadership: A multi-level conceptual framework. *The Leadership Quarterly, 20*(3), 405-420.

Palanski, M. E., & Yammarino, F. J. (2011). Impact of behavioral integrity on follower job performance: A three-study examination. *The Leadership Quarterly*, *22*(4), 765-786.

Pallant, J. (2010). *SPSS survival manual: A step by step guide to data analysis using SPSS* (3rd Ed.). London: McGraw-Hill Eduaction.

Pecis, L. (2016). Doing and undoing gender in innovation: Femininities and masculinities in innovation processes. *Human Relations*, *69*(11), 2117-2140.

Porter, M. E., & Van der Linde, C. (1995). Toward a new conception of the environment-competitiveness relationship. *Journal of economic perspectives, 9*(4), 97-118.

Prottas, D. J. (2008). Perceived behavioral integrity: Relationships with employee attitudes, well-being, and absenteeism. *Journal of Business Ethics*, *81*(2), 313-322.

Prottas, D. J. (2013). Relationships among employee perception of their manager's behavioral integrity, moral distress, and employee attitudes and well-being. *Journal of Business Ethics*, *113*(1), 51-60.

Republic of South Africa: Department of Trade and Industry (2018). *The Chemical Sector.* Retrieved from http://www.thedti.gov.za/industrial_development/sec_chemicals.jsp

Robbins, S. P., & Judge, T. A. (2013). *Organizational Behavior* (15th ed.). New Jersey: Pearson Higher Education.

Rosing, K., Frese, M., & Bausch, A. (2011). Explaining the heterogeneity of the leadership-innovation relationship: Ambidextrous leadership. *The leadership quarterly*, *22*(5), 956-974.

Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *Academy of management review*, *23*(3), 393-404.

Saunders, M., & Lewis, P. (2012). *Doing research in business and management: An essential guide to planning your project*. London: Pearson Education.

Schoorman, F. D., Mayer, R. C., & Davis, J. H. (2007). An integrative model of organizational trust: Past, present, and future. *Academy of Management review, 32(*2), 344-354.

Schuh, S. C., Zhang, X. A., Morgeson, F. P., Tian, P., & van Dick, R. (2018). Are you really doing good things in your boss's eyes? Interactive effects of employee innovative work behavior and leader–member exchange on supervisory performance ratings. *Human Resource Management, 57*(1), 397-409.

Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of management journal, 37*(3), 580-607.

Scott, S. G., & Bruce, R. A. (1998). Innovation and the LMX connection: Getting a foothold on relationships that work. *IEEE Potentials*, *17*(2), 10-11.

Shin, S. J., Yuan, F., & Zhou, J. (2017). When perceived innovation job requirement increases employee innovative behavior: A sensemaking perspective. *Journal of Organizational Behavior*, *38*(1), 68-86.

Simons, T. (2002). Behavioral integrity: The perceived alignment between managers' words and deeds as a research focus. *Organization Science*, *13*(1), 18-35.

Simons, T., Friedman, R., Liu, L. A., & McLean Parks, J. (2007). Racial differences in sensitivity to behavioral integrity: Attitudinal consequences, in-group effects, and" trickle down" among Black and non-Black employees. *Journal of Applied Psychology*, *92*(3), 650.

Simons, T., Leroy, H., Collewaert, V., & Masschelein, S. (2015). How leader alignment of words and deeds affects followers: A meta-analysis of behavioral integrity research. *Journal of Business Ethics, 132*(4), 831-844.

Sin, H. P., Nahrgang, J. D., & Morgeson, F. P. (2009). Understanding why they don't see eye to eye: An examination of leader–member exchange (LMX) agreement. *Journal of Applied Psychology*, *94*(4), 1048.

Swanick, M.F., Drayton, S., & Bello Valcarce, M. (2017). 20 years inside the mind of the CEO…What's next?. *PWC report*.

Teece, D., Peteraf, M., & Leih, S. (2016). Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy. *California Management Review*, *58*(4), 13-35.

Tomlinson, E. C., Lewicki, R. J., & Ash, S. R. (2014). Disentangling the moral integrity construct: Values congruence as a moderator of the behavioral integrity–citizenship relationship. *Group & Organization Management, 39*(6), 720-743.

Wang, X., & Dass, M. (2017). Building innovation capability: The role of top management innovativeness and relative-exploration orientation. *Journal of Business Research, 76*, 127-135.

Wang, X. H., Fang, Y., Qureshi, I., & Janssen, O. (2015). Understanding employee innovative behavior: Integrating the social network and leader–member exchange perspectives. *Journal of Organizational Behavior*, *36*(3), 403-420.

Way, S. A., Simons, T., Leroy, H., & Tuleja, E. A. (2018). What is in it for me? Middle manager behavioral integrity and performance. *Journal of Business Ethics, 150*(3), 765-777.

Werbel, J. D., & Lopes Henriques, P. (2009). Different views of trust and relational leadership: Supervisor and subordinate perspectives. *Journal of Managerial Psychology*, *24*(8), 780-796.

Williams, C. L., Kilanski, K., & Muller, C. (2014). Corporate diversity programs and gender inequality in the oil and gas industry. *Work and Occupations*, *41*(4), 440-476.

Yu, L. (2007). Measuring the culture of innovation. *MIT Sloan Management Review, 48*(4), 7.

Yuan, F., & Woodman, R. W. (2010). Innovative behavior in the workplace: The role of performance and image outcome expectations. *Academy of Management Journal, 53*(2), 323-342.

Zhao, X., Lynch Jr, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of consumer research*, *37*(2), 197-206.

Appendices

Appendix A: Questionnaire

Dear participant,

I am currently a MBA student at the Gordon Institute of Business Science. I am conducting research regarding how what a leader says compares to what they do and how this encourages innovation amongst the individuals in the team.

Subsequently, you are requested to please participate in the survey by clicking on the link below and answering a short questionnaire. The questionnaire should take approximately 15 minutes to complete, is completely voluntary and you can withdraw at any time without penalty. It is important to note that your participation is completely anonymous and all data reported will be aggregated to represent the total group.

By completing this survey, you indicate that you voluntarily participate in this research. If there are any concerns, you are welcome to contact my supervisor or myself.

Our details are provided below:

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072 4466 263	011 771 4284

https://www.surveymonkey.com/r/Kuben_Kistan_MBA_Research_Survey

1. There is a match between my manager's words and actions

- ◯ Always
- ◯ Usually
- ◯ Never
- ◯ Sometimes
- ◯ Rarely

2. My manager delivers on promises

- ◯ Always
- ◯ Usually
- ◯ Never
- ◯ Sometimes
- ◯ Rarely

3. My manager practices what he / she preaches

- ◯ Always
- ◯ Usually
- ◯ Never
- ◯ Sometimes
- ◯ Rarely

4. My manager does what he / she says he / she will do

- ◯ Always
- ◯ Usually
- ◯ Never
- ◯ Sometimes
- ◯ Rarely

5. My manager conducts himself / herself by the same values he / she talks about

- ◯ Always
- ◯ Usually
- ◯ Never
- ◯ Sometimes
- ◯ Rarely

6. My manager shows the same priorities that he / she describes

- ◯ Always
- ◯ Usually
- ◯ Never
- ◯ Sometimes
- ◯ Rarely

7. When my manager promises something, I can be certain that it will happen

- ◯ Always
- ◯ Sometimes
- ◯ Usually
- ◯ Rarely
- ◯ Never

8. If my manager says he / she is going to do something, he / she will

- ◯ Always
- ◯ Sometimes
- ◯ Usually
- ◯ Rarely
- ◯ Never

9. My manager keeps my interests in mind when making decisions

- Always
- Sometimes
- Usually
- Rarely
- Never

10. I would be willing to let my manager have complete control over my future in this company

- Always
- Sometimes
- Usually
- Rarely
- Never

11. If my manager asks why a problem occurred, I would speak freely even if I were partly to blame

- Always
- Sometimes
- Usually
- Rarely
- Never

12. I feel comfortable being innovative because my manager understands that sometimes creative solutions do not work

- Always
- Sometimes
- Usually
- Rarely
- Never

13. It is important for me to have a good way to keep an eye on my manager

- Always
- Sometimes
- Usually
- Rarely
- Never

14. Increasing my vulnerability to criticism by my manager would be a mistake

- Always
- Sometimes
- Usually
- Rarely
- Never

15. If I had my way, I would not let my manager have any influence over decisions that are important to me

- ◯ Always
- ◯ Usually
- ◯ Never
- ◯ Sometimes
- ◯ Rarely

16. I create new ideas for difficult issues

- Always
- Usually
- Never
- Sometimes
- Rarely

17. I search out new working methods, techniques or instruments

- Always
- Usually
- Never
- Sometimes
- Rarely

18. I generate original solutions for problems

- Always
- Usually
- Never
- Sometimes
- Rarely

19. I mobilise support for innovative ideas

- Always
- Usually
- Never
- Sometimes
- Rarely

20. I acquire approval for innovative ideas

- Always
- Usually
- Never
- Sometimes
- Rarely

21. I make important organizational members enthusiastic for innovative ideas

- Always
- Usually
- Never
- Sometimes
- Rarely

22. I transform innovative ideas into useful applications

- Always
- Sometimes
- Usually
- Rarely
- Never

23. I introduce innovative ideas into the work environment in a systematic way

- Always
- Sometimes
- Usually
- Rarely
- Never

24. I evaluate the value of innovative ideas

- Always
- Sometimes
- Usually
- Rarely
- Never

25. What is your age in years?

26. For how long (in years) have you been working for the organisation?

27. What is your gender?

28. What is the highest level of school you have completed or the highest degree you have received?

- Less than high school degree
- High school degree or equivalent
- Masters degree
- Doctorate degree
- Some college but no degree
- Bachelors degree

29. For how long (in years) have you worked with your manager?

Appendix B: Additional info on descriptive statistics

Table 14: Means, medians and standard deviations of data collected per item per construct

		Mean	Median	Standard Deviation
Behavioural integrity	BI1	3.73	4	0.94
	BI2	3.69	4	0.89
	BI3	3.79	4	1.04
	BI4	3.81	4	0.82
	BI5	3.89	4	1.06
	BI6	3.84	4	0.86
	BI7	3.59	4	0.92
	BI8	3.86	4	0.87
Trust	TST1	3.25	3	1.04
	TST2	2.22	2	1.28
	TST3	4.03	4	1.11
	TST4	3.42	4	1.11
	TST5	3.12	3	1.09
	TST6	3.03	3	1.20
	TST7	3.05	3	1.20
Innovative work behaviour	IWB1	3.62	4	0.89
	IWB2	3.75	4	0.97
	IWB3	3.69	4	0.93
	IWB4	3.62	4	0.92
	IWB5	3.74	4	0.98
	IWB6	3.30	3	0.97
	IWB7	3.35	3	0.92
	IWB8	3.36	3	0.96
	IWB9	3.71	4	1.02

From Table 14, it can be seen that the average score per item is above three and closer to four suggesting a fairly noticeable degree of perceived behavioural integrity. The standard deviations are also fairly consistent and just under one except for BI5. With regards to trust, it revealed an interesting result with TST2 ("I would be willing to let my manager have complete control over my future in this company") showing the lowest average mean of any item whilst TST3 ("If my manager asked why a problem occurred, I would speak freely even if I were partly to blame") showed the highest average mean of any item. This is a very interesting result as TST3 could also be guided by a company culture aspect of honesty. The average standard deviations were also all above one being the highest of all three

scales used. Innovative work behaviour was also above three on average with a smaller average standard deviation as compared trust with only one item above one.

Results for selected T-Tests per item

1. Level of education

For employees with Bachelor's and lower versus Master's and higher, only items TST5 and TST7 showed statistically significant differences

2. Gender

For female versus male employees, only IWB5 and TST7 were statistically significant

3. Tenure with manager

When tenure with manager was along between three years or less, only BI7, BI8 and TST6 showed statistical differnces.

4. Years of employment with company

When considering years of employment with company along the split of 15 years or less, it can be seen that only TST3 and TST6 were statistically significant.

Results for selected T-Tests per component for age

Age was compared on a component level against the ranges shown in Figure 2. Age groups were 20-29, 30-39, 40-49, 50 years and over. The following were noted as statistically significant.

20-29 vs 30-39 showed that only behavioural integrity was statistically significant

20-29 vs 40-49 showed that only behavioural integrity was statistically significant

Appendix C: Preparation for factor analysis

The Kaiser-Meyer-Olkin and a test for sphericity (the Bartlett's test) for each construct are shown in Table 15, 16 and 17 (Beavers et al., 2013). Table 18 shows the data for the rotated component matrix. Table 19 showing the total variance explained for the sample with Figure 13 showing the scree plot for the data.

Table 15: Kaiser-Meyer-Olkin and Bartlett's test results for behavioural integrity

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.94
Bartlett's Test of Sphericity	Approx. Chi-Square	837.84
	Degrees of freedom	28
	Significance	0.00

Table 16: Kaiser-Meyer-Olkin and Bartlett's test results for trust

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.86
Bartlett's Test of Sphericity	Approx. Chi-Square	296.73
	Degrees of freedom	21
	Significance	0.00

Table 17: Kaiser-Meyer-Olkin and Bartlett's test results for innovative work behaviour

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.90
Bartlett's Test of Sphericity	Approx. Chi-Square	654.10
	Degrees of freedom	36
	Significance	0.000

A Kaiser-Meyer-Olkin (KMO) figure over 0.90 indicated a "marvelous" fit whilst a figure of 0.80 to 0.89 indicates a "meritorious" fit (Beavers et al., 2013). Bartlett's test of sphericity is 0.00 which indicated that it was significant ($p < 0.05$) (Pallant, 2010). This gives confidence to proceed with factor analysis to determine the structure of the components of behavioural integrity, trust and innovative work behaviour.

Table 18: Rotated component matrix of items of behavioural integrity, trust and innovative work behaviour

	Behavioural integrity / trust	Innovative work behaviour	Trust	Factor 4
BI1	0.82			
BI2	0.86			
BI3	0.88			
BI4	0.83			
BI5	0.87			
BI6	0.78			
BI7	0.87			
BI8	0.86			
TST1	0.70			
TST2	0.67		0.34	
TST3	0.43		0.58	
TST4	0.54		0.60	
TST5			0.42	
TST6	0.35		0.75	
TST7	0.67			
IWB1		0.79		
IWB2		0.85		
IWB3		0.86		
IWB4		0.78		0.31
IWB5				0.79
IWB6		0.76		0.40
IWB7		0.80		
IWB8		0.77		
IWB9		0.70		
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				

The results of the rotated component matrix of the exploratory factor analysis was presented in Table 10. All items with a loading above 0.3 was considered (Pallant, 2010) whilst Costello and Osborne (2005) suggest an acceptable loading of 0.5 or higher. There should be three or more items with an acceptable factor loading per component to be considered (Beavers et al., 2013). As mentioned above, the varimax loading was chosen as the basis to conduct for analysis and the rotated component matrix converged in six iterations.

Trust split over Factor 1 (three items) and Factor 3 (four items). This suggests that behavioural integrity is closely linked to trust. This view is supported by literature however

there is a clear distinction made in literature about these two separate constructs (Hinkin & Schriesheim, 2015). Nevertheless, this still holds important implications for the interpretation of the results from the study as the trust factor could be confused with the beavioural integrity factor. There is also a concern with TST4 as it cross loads fairly evenly over two components and hence could affect both constructs. According to Costello and Osborne (2005), the researcher can choose whether to drop the item. In this case, the item is retained at the factor analysis phase.

Factor 4 suggests that innovative work behaviour split over innovative work behaviour and Factor 4 although IWB4 and IWB6 loaded higher in innovative work behaviour. The items that gathered in Factor 4 are the items related to idea promotion (the second phase of the innovative work behaviour process). Hence Factor 4 is not considered as a separate component and from the rotated component matrix, a three component model is suggested.

This is in agreement with the model proposed in Figure 1. From the factor loading, it is expected that TST5 (less than 0.5) and IWB5 (Factor 4 loading) will be excluded in the final model.

Table 19: Total variance explained of each component detected

Components	Expected construct	Items	Eigenvalues		
			Total	Percentage of variance	Cumulative percentage of variance
1	Behavioural integrity / Trust	BI1 - BI8, TST1, TST2, TST7	8.80	36.68	36.68
2	Innovative work behaviour	IWB1-IWB4, IWB6-IWB9	5.24	21.85	58.53
3	Trust	TST3, TST4, TST6	1.33	5.54	64.07
4	Innovative work behaviour - idea promotion	IWB5	1.10	4.56	68.63

The total variance explained was then used to validate the existence of the different constructs in the opinions of the persons who responded completely to the survey. Eigenvalues that are greater than one are considered as a component for analysis (Hair et al., 2014). As can be seen from Table 18, there are four main components for the data. The component number 1 has the highest eigenvalue (8.80) which corresponds to 36.68%

of the total variance while the last component (number 4) has an eigenvalue of 1.10 which represents 4.56% of the total variance. On a four factor solution, the total variance explained is 68.63% which is good.

The items that lead to the constructs are analysed in chapter 6. Component 1 was presumed to be behavioural integrity along with trust whilst component 2 was thought to be innovative work behaviour. Component 3 was presumed to be trust and was the last of the components that loaded with three or more items. Although Table 11 indicates a four factor solution, the scree plot (Figure 13) was analysed to give further information to guide the decision.

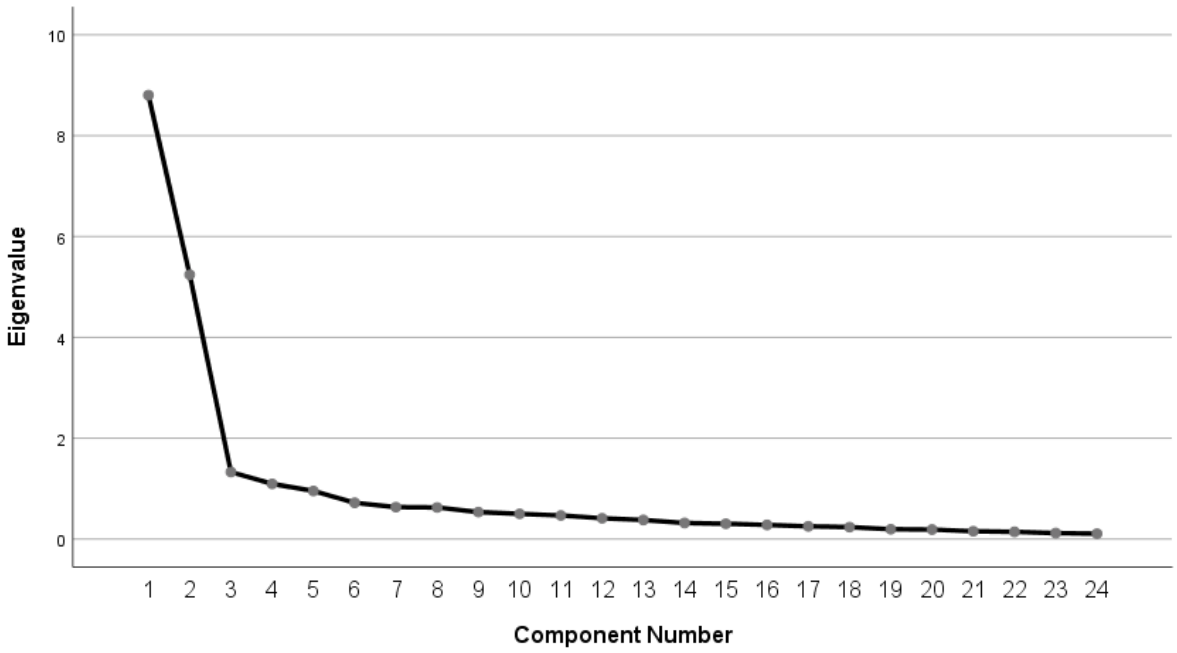

Figure 13: Scree plot of components

The scree plot of the eigenvalues are presented in Figure 13. The interpretation of the scree plot is to consider factors before the bend in the elbow (Beavers at al., 2013; Costello & Osborne, 2005). The scree plot suggests a three-factor solution as indicated through a clear break after the third component. The suggestion of the scree plot is consistent with the conceptual model as it has three constructs (Behavioural integrity, Trust, and Innovative work behaviour). The three factor solution was chosen supplemented by the proposed model, the scree plot and rotated component matrix. When looking at a four factor solution

for total variance explained of the items of the scales used (Table 19), it can be seen that the fourth component only explains a further 4.56% and can be omitted as the total variance explained was 64.07%.

Appendix D: Consistency matrix

Research question	Literature review	Data collection tool	Analysis
Does behavioural integrity of managers positively predicts employees trust?	Behavioural Integrity: Alfes, Truss, Soane, Rees, & Gatenby, 2013; Carnevale, Huang, Crede, Harms & Uhl-Bien, 2017; Cheng, Jiang, Cheng, Riley, & Jen, 2015; Colquitt, Scott, & LePine, 2007; Dieen, Lewicki, & Tomlinson, 2006; Dinh, Lord, Gardner, Meuser, Liden, & Hu, 2014; Friedman, Hong, Simons, Chi, Oh, & Lachowicz, 2018; Hinkin & Schriesheim, 2015; Kahn, 1990; Kannan-Narasimhan and Lawrence, 2012; Krylova, Jolly, & Phillips, 2017; Leroy, Dierynck, Anseel, Simons, Halesleben, McCaughey, Savage, & Sels, 2012; Mayer, Kuenzi, Greenbaum, Bardes, & Salvador, 2009; O'Cass & Sok, 2013; Palanski, Cullen, Gentry, & Nichols, 2015; Palanski & Yammario, 2007; Prottas, 2008; Prottas, 2013; Scott & Bruce,1994; Scott & Bruce, 1998; Simons, 2002; Simons, Friedman, Liu, & McLean Parks, 2007; Simons, Leroy, Collewaert, & Masschelein, 2015; Sin, Nahrgang, & Morgeson, 2009; Tomlinson, Lewicki, & Ash, 2014; Way, Simons, Leroy, & Tuleja, 2018; Werbel & Lopes, 2009;	Questions: 1 through to 8 for BI and 9 through to 15 for trust.	Hypothesis testing – regression through SEM

	Trust: Agarwal, 2013; Chen, Lam, & Zhong, 2012; Colquitt, Scott, & LePine, 2007; Frazier, Tupper, & Fainshmidt, 2016; Friedman, Hong, Simons, Chi, Oh, & Lachowicz, 2018; Fulmer & Ostroff, 2017; Hernandez, Long, & Sitkin, 2014; Hinkin & Schriesheim, 2015; Kahn, 1990; Martin, Guillaume, Thomas, Lee, & Epitropaki, 2016; Mayer, Davis & Schoorman, 1995; Palanski & Vogelgesang, 2011; Palanski & Yammario, 2007; Palanski & Yammarino, 2009; Palanski & Yammario, 2011; Rousseau, Sitkin, Burt, & Camerer, 1998; Schoorman, Mayer & Davis, 2007; Simons, 2002; Simons, Leroy, Collewaert, & Masschelein, 2015; Sue-Chan, Au, & Hackett, 2012; Way, Simons, Leroy, & Tuleja, 2018; Yuan & Woodman, 2010		

Is there a positive relationship between behavioural integrity of managers and employees trust?	Trust: Agarwal, 2013; Chen, Lam, & Zhong, 2012; Colquitt, Scott, & LePine, 2007; Frazier, Tupper, & Fainshmidt, 2016; Friedman, Hong, Simons, Chi, Oh, & Lachowicz, 2018; Fulmer & Ostroff, 2017; Hernandez, Long, & Sitkin, 2014; Hinkin & Schriesheim, 2015; Kahn, 1990; Martin, Guillaume, Thomas, Lee, & Epitropaki, 2016; Mayer, Davis & Schoorman, 1995; Palanski & Vogelgesang, 2011; Palanski & Yammario, 2007; Palanski & Yammarino, 2009; Palanski & Yammario, 2011; Rousseau, Sitkin, Burt, & Camerer, 1998; Schoorman, Mayer & Davis, 2007; Simons, 2002; Simons, Leroy, Collewaert, & Masschelein, 2015; Sue-Chan, Au, & Hackett, 2012; Way, Simons, Leroy, & Tuleja, 2018; Yuan & Woodman, 2010 IWB: Alfes, Truss, Soane, Rees, & Gatenby, 2013; Amabile & Pratt, 2006; Audenaert, Vanderstraeten, & Buyens, 2017; Bauer & Leker, 2017; Binnewies, Ohly, & Niessen, 2008; Carrasco, 2014; Carnevale, Huang, Crede, Harms & Uhl-Bien, 2017; de Jong & den Hartog, 2010; Dinh, Lord, Gardner, Meuser, Liden, & Hu, 2014; Frosch, 2011; Hornsby, Kuratko, & Montagno, 1999; Janssen, 2000; Janssen & Yperen, 2004; Jaruzelski, Staack, & Chwalik, 2017; Lee, 2008; Lukes &	Questions 9 through to 15 for trust and 16 through to 24 for IWB	Hypothesis testing – regression through SEM

	Stephan, 2017; Madjar, Greenberg, & Zheng, 2011; Manso, 2011; Manso, 2017; Mumford & Licuanan, 2004; Ng & Feldman, 2010; Ng & Feldman, 2013; O'Cass & Sok, 2013; O'Reilly & Tushman, 2013; Palanski & Vogelgesang, 2011; Porter & Van der Linde, 1995; Rosing, Frese, & Bausch, 2011; Scott & Bruce,1994; Scott & Bruce, 1998; Shin, Yuan, & Zhou, 2017; Wang & Dass, 2017; Williams, Kilanski, & Muller, 2014; Yuan & Woodman, 2010		
Establish if there is a direct relationship between behavioural integrity and innovative work behaviour.	Behavioural Integrity: Alfes, Truss, Soane, Rees, & Gatenby, 2013; Carnevale, Huang, Crede, Harms & Uhl-Bien, 2017; Cheng, Jiang, Cheng, Riley, & Jen, 2015; Colquitt, Scott, & LePine, 2007; Dieen, Lewicki, & Tomlinson, 2006; Dinh, Lord, Gardner, Meuser, Liden, & Hu, 2014; Friedman, Hong, Simons, Chi, Oh, & Lachowicz, 2018; Hinkin & Schriesheim, 2015; Kahn, 1990; Kannan-Narasimhan and Lawrence, 2012; Krylova, Jolly, & Phillips, 2017; Leroy, Dierynck, Anseel, Simons, Halesleben, McCaughey, Savage, & Sels, 2012; Mayer, Kuenzi, Greenbaum, Bardes, & Salvador, 2009; O'Cass & Sok, 2013; Palanski, Cullen, Gentry, & Nichols, 2015;	Questions 1 through to 8 for BI and 16 through to 24 for IWB	Hypothesis testing – regression through SEM

	Palanski & Yammario, 2007; Prottas, 2008; Prottas, 2013; Scott & Bruce,1994; Scott & Bruce, 1998; Simons, 2002; Simons, Friedman, Liu, & McLean Parks, 2007; Simons, Leroy, Collewaert, & Masschelein, 2015; Sin, Nahrgang, & Morgeson, 2009; Tomlinson, Lewicki, & Ash, 2014; Way, Simons, Leroy, & Tuleja, 2018; Werbel & Lopes, 2009; IWB: Alfes, Truss, Soane, Rees, & Gatenby, 2013; Amabile & Pratt, 2006; Audenaert, Vanderstraeten, & Buyens, 2017; Bauer & Leker, 2017; Binnewies, Ohly, & Niessen, 2008; Carrasco, 2014; Carnevale, Huang, Crede, Harms & Uhl-Bien, 2017; de Jong & den Hartog, 2010; Dinh, Lord, Gardner, Meuser, Liden, & Hu, 2014; Frosch, 2011; Hornsby, Kuratko, & Montagno, 1999; Janssen, 2000; Janssen & Yperen, 2004; Jaruzelski, Staack, & Chwalik, 2017; Lee, 2008; Lukes & Stephan, 2017; Madjar, Greenberg, & Zheng, 2011; Manso, 2011; Manso, 2017; Mumford & Licuanan, 2004; Ng & Feldman, 2010; Ng & Feldman, 2013; O'Cass & Sok, 2013; O'Reilly & Tushman, 2013; Palanski & Vogelgesang, 2011; Porter & Van der Linde, 1995; Rosing, Frese, & Bausch, 2011; Scott & Bruce,1994; Scott & Bruce, 1998; Shin, Yuan, &		

	Zhou, 2017; Wang & Dass, 2017; Williams, Kilanski, & Muller, 2014; Yuan & Woodman, 2010		