



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA



**The impact of leader member exchange on shop-floor
worker innovation in South African manufacturing firms**

Carl David Jordaan
99063833

**A research project submitted to the Gordon Institute of Business Science,
University of Pretoria, in partial fulfilment of the requirements for the degree of
Master of Business Administration.**

23 Oct 2012

Abstract

This study investigates the impact that certain constructs of Leader Member Exchange (LMX) between supervisors and shop floor workers of South African manufacturing firms have on the willingness of the shop floor workers to introduce new ideas. In particular, the constructs; trust, development of skills and inclusion of the worker is examined. Since shop-floor workers are intimately involved with their day to day operations and work at the coalface, the ideas recommended by these individuals are suggested to often be antecedents of innovation. By gaining an understanding of the relationship between the aforementioned LMX constructs and the willingness of shop floor workers to introduce new ideas, certain modes of behavioural interaction can be implemented in order to enhance shop floor innovation. It is argued that such strategic intervention in turn will result in shop floor innovation as a source of competitive advantage for an organisation.

The primary data was collected through physical interviews using a questionnaire that addresses all the mentioned constructs. All of the 50 dyads were usable in the correlation and regression models run. The outcome of this research supports the literature that trust and inclusion are positively correlated with the willingness of shop floor workers to introduce new ideas. Notably was the extent to which workers and supervisors perceived levels of worker inclusion differently. The regression analysis reveals that some of the willingness of workers to introduce new ideas can be explained by the presence of all three explanatory variables namely, trust, development and inclusion. The research has shown that trust contributes to willingness of workers to introduce new ideas, but in contrast to literature, development has a negative impact. The results provide insight into the relationships between these constructs and the willingness of shop floor workers in South African manufacturing firms to introduce new ideas.

Keywords: Innovation, New Ideas, Leader Member Exchange (LMX), Trust, Development, Inclusion



Declaration

Declaration

I declare that this research is my own work. It is submitted in partial fulfilment of the requirements for the degree of Masters in 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.

Name: Carl David Jordaan

A handwritten signature in black ink that reads "Carl David Jordaan". The signature is written in a cursive style with some loops and flourishes.

Signature:

Date: 7 November 2012



Acknowledgements

I would like to thank the following individuals for their continuous contributions and support during this project.

Prof. Helena Barnard, my supervisor, for your inspiration, guidance and kindness throughout this research project. I feel truly blessed to have had you on my side.

Fanie and Louise Jordaan, my parents, for your benevolence, love and unwavering support during the last two years and throughout my life. I dedicate this thesis to you both.

Johan van Heerden, my good friend without whose help I would never have obtained the valuable data for this research study.

To the 2011/2012 evening group and faculty at Gibs, in particular, *William Campbell*, *Stephan van der Merwe*, *Andre Coertzen*, *Mark Stafford*, *Anneke Booyens*, *Louise Meny-Gibert*, *Nalani Thaver* and *Marnie Miny*.

Table of Contents

CHAPTER 1: INTRODUCTION..... 1

1.1 The Importance of Innovation..... 1

1.2 The Need for this Research:..... 2

1.3 The Significance of Innovation at different Levels throughout the Organisation 4

1.4 The South African Context. 5

1.5 Research Objectives 8

1.6 Outline of the Research Report 9

CHAPTER 2: LITERATURE REVIEW 10

2.1 Innovation and new Ideas 10

2.2 Leader-Member Exchange (LMX) 13

2.3 Trust..... 17

2.3.1 Definition and Concept 17

2.3.2 Aspects of Trust in Organisations 17

2.3.1 Trust and Innovation 19

2.4 Development..... 24

2.4.1 Definition and Concept 24

2.4.2 Importance of Development..... 24

2.4.3 Development and Innovation 25

2.5 Inclusion..... 30

2.5.1 Definition and Link to Diversity..... 30

2.5.2 Importance of Inclusion..... 31

2.5.3 Inclusion and Innovation 33

2.6 Conclusion 37

CHAPTER 3: RESEARCH HYPOTHESES 40

CHAPTER 4: RESEARCH METHODOLOGY..... 41

4.1 Methodology 41

4.1.1 Research Design and Type 41

4.1.2 Research Method, Technique and Tool 42

4.2 Unit of analysis..... 46

4.3 Sampling Method 47

4.4 Scope and Universe 47

4.5 General Findings..... 47



Table of Contents

4.6	Research Limitations.....	48
	<i>CHAPTER 5: RESULTS.....</i>	<i>49</i>
5.1	Responses	49
5.2	Demographics	49
5.2.1	Control Variables	49
5.2.2	Age.....	49
5.2.3	Gender	50
5.2.4	Race.....	50
5.2.5	Education	51
5.2.6	Language	52
5.2.7	Tenure.....	52
5.3	Cronbach’s Alpha.....	53
5.4	Normality and Descriptive Statistics	53
5.5	Construct T-Tests.....	55
5.6	Factor Analysis.....	57
5.7	Construct Correlations.....	58
5.8	Construct Linear Regression	60
	<i>CHAPTER 6: DISCUSSION OF RESULTS.....</i>	<i>65</i>
6.1	Significant Construct Results and Interpretations	65
6.2	A Comment on Construct Variables	70
6.3	Comment on t-Tests.....	71
6.4	Comment on Factor Analysis and Regression.....	72
	<i>CHAPTER 7: CONCLUSION</i>	<i>76</i>
7.1	Summary of the Study.....	76
7.2	Implications for Management	77
7.3	Limitations.....	79
7.4	Recommendations for future Research	79
7.5	Conclusion	80
	<i>REFERENCE LIST.....</i>	<i>81</i>

Chapter 1: Introduction

1.1 The Importance of Innovation.

Innovation is regarded as a key source of an organisation's competitive advantage (Goswami & Mathew, 2004, p. 1). Moreover, Mika (2007) states that many believe that innovation is the most important driver of macroeconomics today. The business environment and context of the 21st century is characterized by rapid and disruptive change. Changes are the results of numerous macro, political and environmental forces at play in a global context. These forces need to be anticipated and strategically addressed in order for any organization to be sustainable. Globalisation brings with it considerations of increased competition. The fostering of innovation and creativity is necessary for companies to remain competitive (Mika, 2007, p. 6).

Gao (2011) explains how "...traditional strategies of catching up with multi-national enterprises (MNE's) are nowadays no longer effective..." (Gao, 2011, p. 1). In today's era of globalisation, innovation based differentiation is one key requirement to succeed. This strategy is used by leading firms to catch up with MNE's in market and/or technology development (Gao, 2011). Innovative organizations will be better equipped to align to the changing external business environment, and will be more responsive to various stakeholders' changing requirements. Also, with the increase of sustainable environmental requirements, companies will have to become more innovative in order to comply. Otani (2010) explains how Japanese firms are innovative leaders with regard to this.

This research aims to shed light on the impact that supervisors have on the ability of their workers to become more innovative. According to Yu and Liang (2004), the interaction between these parties is referred to as leader member exchange (LMX). This exchange occurs within the context of an organisational culture, and in particular can be characterised by certain constructs. The impact of these constructs on the worker's willingness to introduce new ideas is explored and tested in this study. The link between new ideas and innovation is established in the literature review.

1.2 The Need for this Research:

Friedrich, Mumford, Vessey, Beeler and Eubanks (2010) suggest that leadership characteristics are anticipated to contribute to innovation, but the extent has been ill defined and minimally researched. The impact of leadership on innovation has mainly been researched at the CEO/senior management level of, for instance, innovation champion organisations, and not at lower levels such as the shop floor. It is believed that an excellent mentor and his/her relationship with the subject (i.e. subordinate) is a driver of innovation (Mika, 2007). This relates to the interaction of a leader and development of a member that manifests within an LMX relationship.

Zhou (2003) however suggests that "...little is known concerning the type of behaviours that supervisors should engage in to facilitate creativity..." (Zhou, 2003, p. 417). Different innovation studies have explored the influence of leader behaviours using models developed in relation to performance outcomes, e.g. leader behaviours that positively affect outcomes such as effectiveness and efficiency rather than innovation-related outcomes (De Jong & Den Hartog, 2007).

Singh (2011) states that top innovative companies worldwide unlock innovation and creativity by building innovative cultures. Scarbrough and Corbet (1992) suggest that innovation in organisations cannot reach its climax if it is detached from its socio-organisational context. Research literature on effective operation of innovation at organisational level, have interpreted factors which are human, social, and cultural (Singh, 2011). Some relationship between innovation and organisational culture is therefore expected to exist. More proof of the need for this research, is, according to Singh (2011), the notion that innovation involves a broad process of knowledge-sharing which enables the implementation of, amongst other things, new ideas.

Kenny and Reedy (2006) did some research on culture and innovation in Irish firms. Literature shows little agreement on the type of organisational culture needed to improve creativity and innovation (Kenny and Reedy, 2006). This study found that the top two sources of innovative ideas came from top management. The market and customers were found to be the biggest drivers of innovation (Kenny & Reedy, 2006, p. 137). The current

study differs from that one, in that it focuses on specific LMX constructs within dyadic relationships and the willingness of shop floor workers in South Africa to introduce new ideas.

Previous research by Cakar and Ertürk (2010) was also done on SMEs in Turkey where primarily the correlation between Hofstede's cultural dimension (e.g. uncertainty avoidance and power distance) and innovation was analysed at firm and individual level. Results revealed that empowerment was found to be positively correlated to innovation capability at the individual level for SME's. The current study will, however, focus on trust, development and inclusion.

Robert Rosenfeld, CEO of Idea Connection Systems Inc and an expert in human dynamics that makes innovation happen in companies explains that in terms of innovation, culture trumps everything (Rosenfeld & Euchner, 2012, p. 13). Bezuijen, van Dam, van den Berg and Thierry (2010) suggest that future research should focus on possible improvements in innovation as a result of setting goals in terms of getting employees to engage in learning activities. Therefore, the need for studying the impact of learner development on his/her level of innovation is identified. The article also alludes to the fact that learning is fostered by the relationship that the employee has with his/her leader.

This intended research area is fairly uncharted, since the uniqueness of the South African context requires new considerations. For example, the South African context is different from most of the previously studied contexts in terms of low education levels, high income inequality, often poor living conditions as well as the resentment and legacies of a divided apartheid era. Therefore, this research should provide a valuable contribution to the existing body of knowledge on LMX and innovation.

Research conducted in the field of innovation is also often related to the structural, process, research and development and market related, as opposed to the human behavioural and social aspects of the organisation. This study I attempts to determine what impact certain constructs of LMX relationships have on shop floor workers' willingness to introduce new ideas.

1.3 The Significance of Innovation at different Levels throughout the Organisation

Since the shop floor level is under review, the significance of innovation at different levels throughout an organisation is also worth mentioning. Over the period Dec 2010 to April 2012 the production capacity at the BMW plant in Rosslyn (South Africa), achieved a staggering improvement from 50 000 to 100 000 cars manufactured per year (Chetty, 2012). This feat was achieved by involving all levels of the workforce in the design phase by encouraging them to become more creative with regards to processes.

As head of strategy and innovation, Richard Chetty explains: “Intense training was undertaken to assist employees’ focus on the need to be more innovative” (Chetty, 2012, p. 22). This led to increased economic benefits due to larger export as well as increased employment realisation. Chetty ascribes much of the developed innovation to leadership (Chetty, 2012). Therefore the interaction of supervisors with their followers is expected to have impact on their innovative capabilities.

As in the case study done on “Imagination Breakthroughs”, a programme instituted by General Electric CEO Jeff Immelt, the innovation initiative was located in operations (Barlett, Hall, & Bennett, 2007). This strategy draws on ideas from a large pool of employees who are required to think outside of the box in order to come up with initiatives that result in game changing innovations. The case study speaks to the notion that innovation developed at operational level drives organic growth (Barlett et al., 2007).

This case also explains that core management competencies required to drive employees’ propensity to innovate are: external focus, imagination, courage, inclusiveness and connection with people. Also, Immelt wanted people to take risks and not be afraid of failing (Barlett et al., 2007). Risk taking is therefore inherent to innovation, as is a level of fearlessness. These ideals and how they relate to innovation will form a concurrent thread throughout this research dissertation.

Friedrich et al. (2010) proposes that leaders have the unique opportunity to influence innovation at every level of innovations. Supervisors play leadership roles over their

workers, not only with regard to decision making, but also interaction. Furthermore, learning that leads to innovation should occur at all levels in organisations, (Singh, 2011). In his new book, Adam Cobb explains this when he states that “...people doing the actual work probably have a better sense of how to get it done than their bosses do” (Cobb, 2012, p.1).

Therefore it may be suggested that having innovative capabilities in people at different levels throughout the organization drives performance, yields favourable results, and should therefore be developed and fostered.

1.4 The South African Context.

Typical shop floor workers in the South African context have certain demographic and social characteristics which are explored. For these workers to experience a fearless working environment where they feel comfortable in suggesting ideas and taking risks would require certain modes of behaviour towards them from their supervisors. For example, the South African context is different in terms of education levels, income inequality, living conditions as well as the resentment and legacies of a divided apartheid era.

In South Africa, most shop floor or factory workers in the manufacturing sector are also typically members closer to the bottom than the top of the economic pyramid. Arnolds, Boshoff, Mazibuko and Klemz (2010) make mention of the fact that there exists huge wage differentials between high and low occupational levels in South Africa. Therefore it can be suggested that low level employees such as shop floor workers live in less than ideal conditions due to lack of funds.

Because of the high unemployment rate in South Africa, job security is very important to blue collar workers (Arnolds et al., p. 89). By this token it can be expected that many of their family members are unemployed and rely on them as breadwinners. Furthermore, the distinction is still valid today that amongst other attributes, “...blue-collar and white collar employees differ in terms of their level of education” (Arnolds et al., p. 91). Therefore it can

be suggested that many shop floor workers have been exposed to sub standard levels of education or exposure to skills development.

The following refers to an event that happened in the mining industry to illustrate the South African context and how differences in perspectives of worker needs could play out. The comparison is relevant because both mineworkers and shop floor workers are members of the bottom of the economic pyramid, have labour related issues, and operate at the coalface of operations.

In August 2012, 3000 mineworkers launched a wildcat strike which resulted in a massacre at Lonmin's Marikana mine near Rustenburg in South Africa (Nkosi, 2012). This strike was sparked by a demand for better wages (Plaut, 2012). Police opened fire on miners killing 34 and injuring 78 (Nkosi, 2012). The Association of Mineworkers and Construction Union and the National Union of Mineworkers have been blamed for provoking the violence due to the rivalry these unions have amongst another (Chappel, & Barnett, 2012). 270 workers were arrested and charged with murder under the apartheid-era "common purpose" rule. Charges were later dropped. Miners agreed to a 22% wage increase and returned to work in September 2012 (Nkosi, 2012).

Miners feel that the cause for this event is that their leaders have abandoned the miners' grassroots concerns (Plaut, 2012). In this case wages were the primary issue. Marikana is essentially a warning sign for South Africa, as the gap between those who have and those who do not have has become so wide that an explosion of social upheavals has resulted (Peyper, 2012). Peyper (2012) states that the workers feel that neither government nor democratic institutions like the unions really care for them or listen to them. Also they feel there is no one they can trust, (Peyper, 2012).

Clem Sunter (2012) feels that this uprising might even be the single random event that could trigger South Africa's own version of the Arab Spring (revolutionary wave of demonstrations and protests). He proposes that leaders should begin the process of transforming our economy into "an inclusive one offering genuine economic freedom and the chance for ordinary people to better their lives and circumstances" (Sunter, 2012).

Besides the human rights issues, there is also an economic imperative to ongoing strikes. This is since the mining sector is economically very important to South Africa. When miners go on strike and materials aren't being mined, colossal amounts of revenue are forgone each day. Instead of the police and the unions and the mining companies blaming each other, perhaps the concerns and needs of the workers' need to be listened to and considered.

There are clearly differences in perspectives of how the workers see their plight and how the leaders be it unions or companies, view it. Two aspects raised above are trust and inclusion. It is therefore suggested that these differences in perspectives could be diminished through leader-member interaction characterised by higher levels of trust and inclusion.

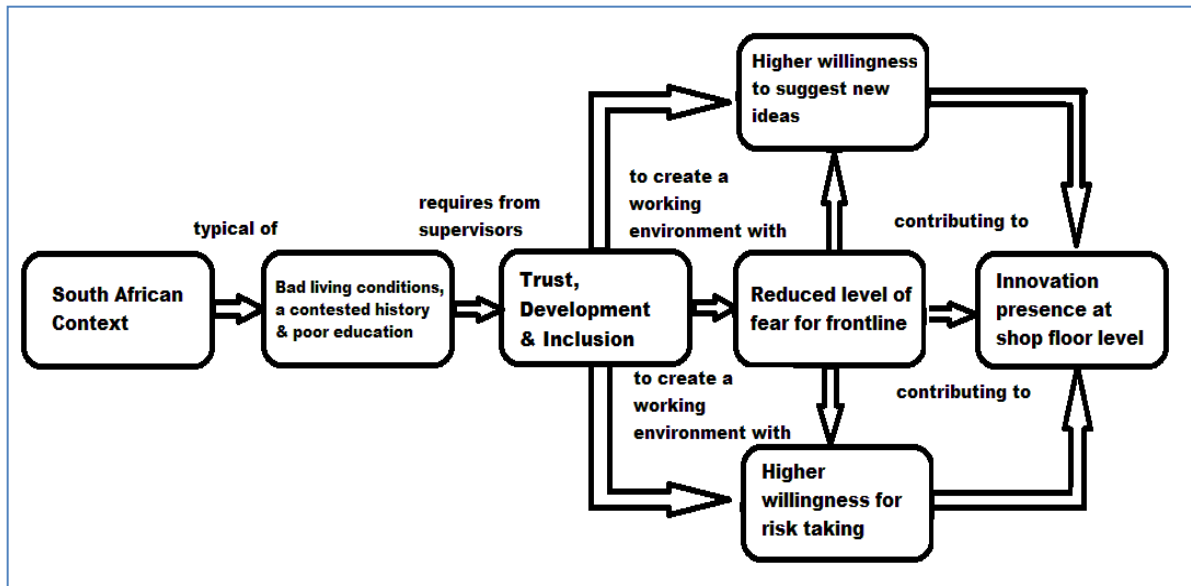
Because many of these individuals are previously disadvantaged and come from the apartheid era, they have often been victims to discrimination and oppression by previous authorities. It can therefore often be assumed that many of these individuals might have difficulties with trusting superiors.

The following LMX constructs (experienced by shop floor workers) will be researched in the literature review that follows. These are:

- Willingness of worker to introduce new ideas
- Level of trust between worker/supervisor
- Development of worker (due to learning)
- Inclusion of worker

The latter three constructs have been identified as relevant in addressing the needs of typical blue collar workers in South Africa. The extent to which these constructs enable innovation at the shop floor level will be explored in terms of relevant literature. The suggested inferences will attempt to justify the following model.

Figure 1.1: LMX constructs expected to enable shop floor innovation.



Due to the complexity of the many variables however, only the above mentioned selection of the proposed model in Figure 1 (right hand side) will be tested in the data capturing and analysis section of this research. These are the trust, development and inclusion variables' impact on workers' willingness to introduce new ideas.

First the connection between willingness to introduce new ideas by shop floor workers and their level of innovation will be established in the literature review. Then, in essence, the research will aim to determine what correlation exists between the levels of trust, development, inclusion and willingness to introduce new ideas by shop floor workers. The purpose is thus to provide better insight into how these dimensions contribute to increased innovation at shop-floor level.

1.5 Research Objectives

1. To make the connection between the introduction of new ideas and innovation.
2. To gain an understanding of different constructs of LMX under review. The chosen constructs to be reviewed and tested are :

- Trust between leader and member

- Level of development of member
 - Level of inclusion experienced by member
3. To establish the relationship of each construct with the willingness of members to introduce new ideas.
 4. Thereby ultimately to develop and test a model in the South African context from existing literature that sets out the requirements in terms of these constructs of supervisor behaviour towards shop floor workers in order to promote their innovativeness.

1.6 Outline of the Research Report

The following research report will be laid out as follows: Chapter 2, a literature review, will attempt to provide rich insight into the different constructs under review. Thereafter the research questions that surfaced from literature will be set out in Chapter 3. The research methodology, Chapter 4, will explain how the data gathering and interpretation will take place in order to address the questions raised in Chapter 3. In Chapter 5 the results are presented and in Chapter 6 the interpretation thereof occurs. The report concludes with Chapter 7, where limitations and recommendations for further research are discussed.

Chapter 2: Literature Review

2.1 Innovation and new Ideas

One definition of innovation is that of “serving the basis for new products and services in the global marketplace” (Kim & Park, 2010). Two processes of innovation are defined by De Jong and Den Hartog (2007); the initiation of a new idea, and then the subsequent implementation thereof. Innovation is here also described as a driving force in a firm’s global competitiveness (Kim & Park, 2010). Innovation is considered one of the key drivers of the long-term success of firms in today’s competitive markets (Singh, 2011).

Moreover, innovation isn’t merely a driver for success; it is in fact a requisite for survival. Firms which are unable to innovate in today’s turbulent economic landscape will “die like the dinosaur” (Singh, 2011, p. 713). Zahra, Nielsen and Bogner (1999) describe innovation as contributing to higher performance in a growing number of industries.

Dervitsiotis (2006) describes how today’s pace of change has become non-linear, accelerating and almost totally unpredictable. Currently, we experience an ever-changing global environment where competition is fierce and where nations like China and India achieve economies of scale. Innovation plays a vital role in achieving improvements in quality and price for South African manufacturing firms, among other things, to stay competitive in the global playing field.

Customer needs change all the time and the extent to which companies respond and serve these needs depends largely on their ability to innovate. Innovation due to competition and diversity has positive spill-over effects such as the encouragement of employment expansion (De Groot, Poot, & Smit, 2007). This is one example of how innovation has also largely accelerated levels of development.

Two dimensions of innovation as expressed by Goswami and Mathew (2005) are newness and novelty. In the context of this article the newness dimension is concerned with how fast a new solution is provided in comparison with that of the competitor or substitute. Therefore it relates to speed. The way in which a new need is served or how an existing

need is served differently than before, relates to the novelty dimension. These novelties are the result of new ideas that are generated, suggested, executed and implemented.

The source of an organisation's innovation may very well lie in its employees. The creativity of employees is often seen as a starting point for organisational innovation (Zhou, 2003). "One way for organizations to become more innovative is to capitalize on their employees' ability to innovate" (De Jong & Den Hartog, 2007, p. 42). This article also proposes that individual innovation helps to attain organizational success.

The presence of engaged employees in an organisation not only ensures incremental benefits during the upswing, but also assures innovative ideas being generated and suggested, (Sarkar, 2011). Therefore it will benefit companies to unleash this creativity by means of certain modes of interaction with its members.

The link to new ideas

Since this research aims to explore the impact of interaction on innovation, a suitable measure of innovation is required. The willingness of members to introduce new ideas has been chosen to gauge their level of innovativeness. The following section attempts to establish the link between new ideas and innovation.

Singh (2010), West and Farr (1990) consider innovation as encompassing both the proposal and application of new ideas. Thompson in Goswami and Mathew (2005) goes as far as to define innovation as the generation, acceptance and implementation of new ideas, processes, and products or services. Goswami and Mathew (2005) identifies the generation of new ideas, the screening of new ideas, and the support for the development of new ideas to allocate resources, as critical factors in developing a culture for innovation.

Elaborating on these suggestions, creative ideas on how to implement and bring something new to the market also relates to innovation, (Goswami & Mathew, 2005). The connection is made well by stating: "To initiate innovations, employees can generate ideas by engaging in behaviours to explore opportunities, identify performance gaps or produce solutions for problems" (De Jong & Den Hartog, 2007, p. 43).

Continuous improvement throughout the organisation is achieved through the generation and implementation of ideas (Kenny & Reedy, 2007). This is said to be characteristic of innovative cultures (Kenny & Reedy, 2007). By this token, the individuals at different levels throughout firm are also expected to be innovative. In order to generate new generations of technology, experimentation with new, unproven ideas needs to be encouraged, whilst the time, resources, and incentives needed must be provided for this (Wyld & Maurin, 2009). According to Conchie in Mika (2007), innovation has to do with both creative ideas, and the action that follows and implements the idea, thereby making an impact in the world.

Generating new ideas at the outset, and then qualifying, filtering, elaborating, promoting and developing a few of these ideas is the basic design of many corporate innovation processes (Euchner & Henderson, 2011). Moreover, this process is built around the notion that the brilliant idea is the critical enabler of innovation, (Euchner & Henderson, 2011).

From these references it can be quite reasonable to conclude that the introduction of the creative new idea is inherent to and an antecedent of innovation. It is therefore an appropriate measure for the purposes of this research project. To reiterate the connection, the sharing of new ideas scored high amongst innovative engaged US employees during a Gallup survey done on respondents on innovation, Mika (2007). This sharing also gave rise to creativity.

From an LMX perspective, the theory of ideas and innovation ties in as follows. Cakar and Ertürk (2010) put forward that: "...organizations need to facilitate innovation by creating and maintaining a cultural environment that supports idea generation and creativity" (Cakar & Ertürk, 2010, p. 348). It can therefore be proposed that the appropriate modes of interactional behaviour should be required to develop such an innovative cultural environment.

The following considerations add to this relationship between ideas and interaction. Innovation, according to the process approach is defined by Van de Ven (1986) as the development and implementation of new ideas by people who engage with other in an institutional context (Singh, 2010). LMX is an example of such engagement, and once

again the notion of new ideas is also exemplified. De Jong and Den Hartog (2007) state that employees can help to improve business performance through their ability to generate ideas and use these as building blocks for new and better products, services and work processes.

Management was cited as the top sources for innovative ideas volunteered by the employees of SMEs in Ireland (Kenny & Reedy, 2003). This raises the question of whether they are alone in generating these ideas, or whether they drive the creation of new ideas with their staff. Persons in managerial roles therefore are suspected to have influence over innovation and in particular the innovation arising from those whom they lead. Whether this holds true for employee at the lowest levels of the organisation is at the core of this research.

2.2 Leader-Member Exchange (LMX)

The leader-member exchange (LMX) relationship is defined by Yu and Liang (2004) as "...a social exchange relationship that happens between the manager and members of a business organization" (Yu & Liang, 2004, p. 253). This relationship is an ongoing one which involves interaction and development. LMX can differ by the quality level of the relationship. High quality LMX is said to lead to high performance at the individual and organisational levels, (Graen & Uhl-Bien, 1995).

In De Jong and Den Hartog (2007), Graen and Scandura describe how high quality LMX relationships entail giving employees tasks that are challenging, support during situations of risk, and the provision of task related resources and recognition, of which all facilitate individual innovation (De Jong & Den Hartog, 2007). Janssen and van Yperen (2004) also found that high-quality relationships had a positive impact on the construct of innovative behaviour.

Bad LMX relationships are also worth discussing, since not only the benefits from good relationships will be lost, but negative consequences may arise from it. Graves and Luciano and (2010) suggest that workers who experience low quality LMX relationships may experience less need satisfaction and autonomous motivation which consequently

could result in less favourable outcomes. Sparrowe and Liden (1997) suggests that a few or even only one low-quality LMX relationship may be enough to upset the potential value added of member diversity on group performance.

How different characteristics of the LMX relationship affects innovation is the issue at hand. Janssen (2005) explains that supervisors can be trained to respond to innovative members in a supportive and fair way. By doing so they encourage their employees to influence people in the workplace to carry out innovative tasks (Janssen, 2005). Other examples of attributes of LMX relationships are; trust, sharing of information, fearlessness and inclusion.

De Jong and Den Hartog (2007) refer to previous work that explains how innovative behaviour of employees depends greatly on those employees' interaction with others in the workplace. Leaders have a powerful source of influence on employees' work behaviours (Yukl, 2002). De Jong and Den Hartog (2007) elaborate on leaders' influence on the innovative behaviour of employees through both their deliberate actions aiming to stimulate idea generation and application, as well as by their more general, daily behaviour.

The advent of these interactional relationships occurs and develops within an organisation's culture. A definition given by Schein explains that organisational culture is: "A pattern of shared basic assumptions learned by a group as it solves its problems of external adaptation and internal integration, which has worked well enough to be considered valid, and therefore, to be taught to new members as the correct way you perceive think and feel in relation to those problems" (Schein, 1992, p. 17).

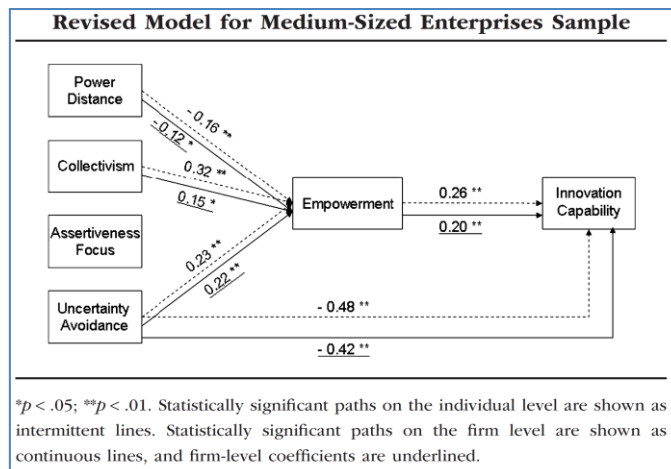
The intended values core to an organization, in support with its vision statement aims to drive desired modes of behaviour to foster a certain culture. In research done on salespeople in financial institutions in South America it was found that positive job attitude relates to increase in some behaviours, e.g. higher extra-role performance, higher in-role performance, as well as lower turnover intention (Jaramillo, Mulki & Boles, 2011). It may therefore be anticipated that positive attitude drives favourable behaviour, like e.g. an eagerness to suggest innovative ideas.

Yu and Liang (2004) raise new concerns regarding LMX which challenge previous thinking. The article proposes that certain modes of high quality LMX lead to “in” and “out” groups. In an organization with a highly political culture, such divisions may cause the out-groups to become less motivated and allocate less of their resources to the organisation due to feelings of uncertainty (Yu & Liang, 2004, p. 253).

Leaders should therefore be sensitive to the relationships they form, and they must regard the needs of everyone they lead in order to avoid such potentially damaging consequences. It is however hard to develop high quality LMX relationships with all subordinates due to, e.g. differences in personalities. This supports the premise that in addition to functional competencies, leaders also require emotional intelligence and aptitude in order to lead effectively.

In research done by Cakar and Ertürk (2010) in the field of organizational culture and innovation, 743 employees from 93 small and medium-sized firms located in Turkey were interviewed. Data analysis results from the medium sized enterprises are more appropriate to this research due to the chosen universe in the methodology section that follows. This example serves as an illustration of how certain constructs of interaction can be found to be correlated with innovation. The figure below shows the impact of some of Hofstede’s dimensions of national culture on empowerment and eventually also on innovation at the firm and individual level of medium enterprises.

Figure 2.1: Relationships between culture, empowerment and innovation of medium sized enterprises at firm and individual levels (Cakar & Ertürk, 2010).



The following results were obtained. For medium-sized enterprises on the individual level of analysis, results suggest that collectivism and uncertainty avoidance are positively associated with the empowerment variable (Cakar & Ertürk, 2010, p. 346). Inclusion is similar to collectivism; therefore inclusion is expected to be correlated with empowerment which mediates innovation capability. Power distance however is negatively related to empowerment, and assertiveness focus bears relation with neither empowerment nor innovation capability. Fear can be a symptom of the level of power distance a member perceives towards his/her leader.

Only uncertainty avoidance was found to be a negative construct which is positively correlated to innovation capability (Cakar & Ertürk, 2010, p. 346). Innovation is about realising new and novel ideas and risk to failure is inherent to these quests. Taking risks is an example of not avoiding uncertainty, and therefore the result makes sense. Furthermore, it was found that. Empowerment fully mediates power distance and collectivism.

These results suggest that empowerment is a consequence of these cultural dimensions and that it is an antecedent of innovative capability. Managers should appreciate that, by including employees in decision making and making them feel valued through participation, their innovation capabilities are increased (Cakar & Ertürk, 2010, p. 346).

Because empowerment mediates the relationship between power distance and innovation capability in medium-sized firms, managers should focus on empowering their employees with the right knowledge sharing through communication (Cakar & Ertürk, 2010, p. 347). Therefore, crafting an inclusive environment with accessible knowledge exchange should result in the development of innovative employees.

Moreover these results give supervisors a sense of what they should do in terms of their interaction and behaviour towards their followers in order to achieve and inspire innovative responses.

2.3 Trust

2.3.1 Definition and Concept

Trust as defined by Mayer, Davis and Schoorman (1995) is the “willingness one exerts in being vulnerable to another” (p. 712). Differently stated, it is the extent to which one is willing to take risk at the hands of a trustee. Another description of trust is defined in Clegg, Unsworth, Epitropaki, and Parker (2002, p. 409) as “...a willingness to accept vulnerability’ based upon having positive expectations about other people’s intentions and behaviours in situations which are interdependent and/or risky” (Rousseau, Sitkin, Burt, & Camerer, 1998). According to Provis (2000) there seems to be no omnipresent definition of trust, although it is inclined to be linked to ethics or principles (Connel, Ferres, & Travaglione, 2003). Trust is therefore also the belief one has in another that that person will behave morally towards oneself.

2.3.2 Aspects of Trust in Organisations

In terms of leader-member exchange (LMX), the concept of trust is based in relationships, and should be viewed as reciprocal according to Mayer, Davis and Schoorman, (2007). Moreover the Mayer et al. (1995) article suggests three antecedents of trust; i.e. ability, benevolence and integrity. This research aims to seek the effect of these antecedents of trust on innovation, or rather in particular on the willingness to introduce new ideas.

Since the shop-floor worker often feels inadequate with respect to his/her abilities due to a lack of education, ability-based trust would address this sense of low self esteem. Ability based trust will also instil in workers a belief in themselves, and that will encourage them to take risks and introduce new ideas because they are presumed to have the needed skills.

Another dimension is benevolence-based trust which is described as the “extent to which a trustee is believed to want to do good to the trustor aside from an egocentric profit motive” (Mayer et. al, 1995). Since many workers live in dire circumstances, benevolence trust from their superior will instil in them a sense that someone wishes them to have personal

and social wellbeing. A supervisor concerned about the wellbeing of workers, should also diminish workers' fear of the supervisor.

In general reciprocal trust between supervisors and their workers will help break the historical legacies of distrust in authority relationships, typical of the South African socio-political and economic past. Since stigma has caused association between the lower class and corruption, integrity-based trust will ensure that the worker will fear the frontline less, since they don't suspect them of being unethical. Integrity-based trust in subordinates should also encourage them to take well calculated risks discreetly.

Mayer et al. (1995, p. 725) proposes that in order to trust someone, risk taking is inherent and that it is an outcome in such a relationship. The Mayer et al. (2007) article extends on this topic by explaining that high levels of control and invalid appraisals diminish the trust an employee has in his supervisor. The amount of information a trustor has about the trustee will also influence the level of trust.

Recently, differences in national culture have caused a decrease in trust exerted. Mayer et al. (2007) also suggests that different individuals have different propensities to trusting others based on personal attributes and experiences. A valuable contribution this article brings is the ways in which distrust can be repaired through knowledge of the damaging events and forgiveness.

McAllister (1995) makes mention of the notion that trust is required for people to work together. Also, that trust between parties is primarily either cognition-based trust (CBT) or affect-based trust (ABT). CBT relates to the belief about a peer's ability and reliability whereas ABT is grounded in emotional care and concern for others. Affect-based trust is therefore similar to benevolence-based trust, and cognition based-trust similar to ability-based trust. Here trust is defined as: "...the extent to which a person is confident in and willing to act on the basis of, the words actions and decisions of others" (McAllister, 1995, p. 25).

The article explains that a certain level of cognition-based trust is required before affect-based trust can develop. After the latter has become substantial, cognition-based trust is

no longer needed. McAllister (1995) makes numerous propositions involving the correlations between ABT and CBT and other behavioural constructs. It is suggested that some of these constructs may facilitate innovation. E.g. it is found that ABT (manager to peer) is positively associated with need-based monitoring (manager to peer), (McAllister, 1995, p. 49). Management expressing high levels of ABT are more inclined to look for opportunities to meet the needs of peers, thereby empowering them to be more productive and possibly also more innovative.

Also, it was found that interpersonal citizenship behaviour is positively associated with ABT. Therefore when the needs of employees are monitored and acted upon and when care is taken, trust is promoted. Also it is suggested that these forms of behaviour should foster a safe environment, where as suggested earlier, risk taking and introduction of ideas would be promoted.

2.3.1 Trust and Innovation

Clegg et al. 2002 also points to their own field work and previous research that indicate trust as a predictor of innovation (Clegg et al., 2002). The following section aims to look at how trust and innovation or idea suggestion is related. This relationship will be explored in different contexts within and outside organisations. Ultimately this section concludes towards a better understanding of the link between supervisor-worker trust and innovation of workers.

In a study done by De Jong and Den Hartog (2007), qualitative interviews were performed on managers in small knowledge intensive service firms. The aim was to evaluate how leaders influence employees' innovative behaviour. It was found that being patient and helpful, listening, and looking out for someone's interests should problems arise, was positively correlated with employees' generation of new ideas (De Jong & Den Hartog, 2007).

In a study conducted on midlevel professionals engaged in knowledge-intensive work, Levin and Cross (2004) researched the role of trust in knowledge transfer. They found that the link of strong ties in dyadic relationships, and the receipt of useful knowledge was

mediated by competence and benevolence-based trust (Levin & Cross, 2004). The article goes further to discuss some beneficial implications such an innovation that arise as a result thereof. According to Grant (1996) organizations utilizing their collective expertise and knowledge are likely to be more innovative. This study is therefore appropriate because the described association between trust, knowledge transfer (development) and innovation is implied.

Trusting a knowledge source to be benevolent and competent should increase the chance that the knowledge receiver will learn from the interaction (Levin & Cross, 2004, p. 1480). The article explains that benevolence will make the learner feel less vulnerable when approaching and enquiring, and that competency will increase the perceived usefulness of the knowledge. In support of this, Chowdhury (2005) found in a study using graduating business students working on projects related to real business situations, that the level of trust within dyads considerably predicted the degree of complex knowledge sharing.

Support motivates employees in both stages (initiation and implementation) of innovation, whilst unreliable behaviour from leaders can really discourage innovative behaviour from their members (De Jong & Den Hartog, 2007). Creating a positive and safe atmosphere that encourages openness and risk taking seems to encourage idea generation and application (De Jong & Den Hartog, 2007). Support is here seen as one of the characteristics of an affect-based trusting relationship.

The results showed that positive impact of strong ties on the receipt of useful knowledge existed because strong ties were typically associated with benevolence-based and competence-based trust, but knowledge received from weak ties contributed even more positively (Levin & Cross, 2004, p. 1480). The study also mentions that weak ties are less redundant than strong ones. Also, competence-based trust is required when transfer of tacit knowledge is to be effective (Levin & Cross, 2004, p. 1481). The managerial application is that trust can be used as an enabler to improve knowledge transfer which leads to innovation in the presence of strong and well as weak ties.

This theory is relevant to the central argument since knowledge transfer will later be proposed to enhance innovation. Trust is therefore seen as an enabler of knowledge

transfer which is suggested to lead to innovation. One construct believed to mediate the relationship between trust and innovation is knowledge sharing and development. To achieve continuous innovation through organisational knowledge development, Chowdhury (2005) proposes that organisations need to build trust amongst its people. This argument is supported by linkages between trust, knowledge sharing and innovation made from literature and the propositions by Levin and Cross (2004) above.

Rosenfeld and Euchner (2012) deem trust as necessary to make organisational cultures innovative. The article goes further to suggest that both head (ability) and heart (benevolence) based trust is required to make members feel comfortable to take risks and be creative. Rosenfeld also suggests that companies should determine what level of trust is needed to induce different types of innovation, and that this invisible dimension should be made visible for discussion, (Rosenfeld & Euchner, 2012).

It may be that a worker has innovative ideas, but lack the willingness to suggest them due to a lack of perceived support. Dougherty and Heller (1994) puts forward that innovative employees need to acquire friends, backers, and sponsors, who can provide the support that is necessary to protect and realize their ideas. These are typically people whom one trusts and again the link to ideas is re-iterated.

Clegg et al. (2002) gives a definition of innovation trust, which is: an expectancy of reasonable and positive reactions by others in response to individual innovation attempts. These reactions may take the form of recognition or rewards, benefitting the individual. From a study where 250 design engineers from two large aerospace organizations were asked to complete questionnaires Clegg et al. (2002) found that when employees believe that they will share the benefits, they make more suggestions (Clegg et al., 2002).

Eisenberger, Huntington, Hutchison, and Sowa (1986) found that beliefs about the extent to which the organization values employees' contributions and cares about their well-being were positively related to the constructiveness of anonymous suggestions made by employees (Clegg et al., 2002). These attributes relate to affect-based and benevolence-based trust. In contrast, with regards to inter-team ABT and CBT, Barczak, Lassk, and Mulki, (2010) makes a different conclusion. CBT helps build a collaborative culture in

which team creativity can thrive, whereas ABT only leads to collaboration without creativity (Barczak et al., 2010).

In terms of the impact of trust between business partners (e.g. people from different companies working on a project) and creativity, the following was found. There seems to be an optimum point of trust where creativity is maximized (Bidault & Castello, 2009). Extreme levels of trust have the implication that ideas are too easily accepted by the other party. It can be expected that a level of scepticism is required to challenge an idea. This could lead to the idea being refined and becoming more novel.

In a study done on 194 employees working in research and development teams of a multinational automotive company, results indicated that followers' trust in top management is related to innovation implementation behaviour (Björn & Sonntag, 2009). It would be interesting to evaluate whether this phenomenon translates similarly to shop floor workers and their supervisors.

More relevant to this dissertation is the trust between a supervisor and a worker, and the anticipated impact that has on innovation. Graen, Hui and Taylor (2006) propose that high-quality relationships are characterized by amongst others mutual trust and respect (Graves & Luciano, 2010). "Many researchers have suggested that good LMX relationships are built on trust, loyalty and affection" (Yu & Liang, 2004, p. 257).

Since innovation is associated with creativity, and high quality LMX relationships are characterized by trust, the study done by Madjar and Ortiz-Walters (2009) on supervisor trust, creativity and employee performance is relevant. This literature suggests that supervisor trust provides the social context which enhances creativity. As previously stated it also encourages members to make their new ideas heard. The consistency of interaction of workers with their supervisors in particular enhances the case for developing trusting relationships even more significant, (Madjar & Ortiz-Walters, 2009).

Benevolence-based trust is a construct worth exploring. One prominent aspect thereof is empathy. Being supportive and compassionate towards others is also anticipated to

impact on their willingness to make new suggestions. The following section will explore this proposition.

A definition by Pavlovich and Krahnke (2011) describes empathy as the acknowledgement and observation of others involving both affective and cognitive responses. Empathy goes beyond sympathy as it has a dimension of vicarious understanding to it. The modern day business environment is characterised by partnerships and connectedness between parties, and this has implications for interaction and relationships (Pavlovich & Krahnke, 2011). Therefore within this context empathy is seen to organize business better (Pavlovich & Krahnke, 2011).

“Organizational success in responding to a stressed employee hinges on the critical role of the frontline supervisor” (Hobson, Kesic, Rosetti, Delunas, & Hobson, 2004). Being compassionate and caring are new leadership skills required for dealing with this (Hobson et al.). Compassion is described as going beyond empathy as it entails action, like offering work flexibility (Pavlovich & Krahnke, 2011, p. 6). In fact, empathy is the special ingredient that distinguishes truly great leaders from everyone else (Stefano & Wasylshyn, 2011).

Expressing empathy is suggested to help restore loyalty, productivity and motivation (Hobson et al., 2004). The challenges that face typical shop floor workers in South Africa outlined earlier can be huge sources of stress. Leaders, who possess the ability of responding to stressed workers in an empathic way, could therefore facilitate them to be more motivated and inspire them to perform better.

The relationship between the development of an employee through learning, and the employee’s willingness to suggest new ideas (to be innovative) will be reviewed in the next section of this chapter. In order for followers to appreciate or learn from their leaders they require to first realize that the leader cares, (Stefano & Wasylshyn, 2011). Therefore it may be reasonable to suggest that a caring leader, exhibiting empathy, could thereby increase his/her follower’s aptitude for learning, and ultimately also their propensity to be innovative.

Moreover the spin-off is that other individuals observing empathy may also be inspired to improve their overall work, (Hobson et al., 2004). One strategy to motivate and inspire employees is to be empathic to their current state (Giovannoni, 2009). Leaders who enable positive deviance in the workplace foster more innovation & creativity” (Pavlovich & Krahnke, 2011, p. 6).

It can therefore be proposed that trust, whether ability-based or benevolence-based, may lead to employees becoming more creative or inspired to suggest new ideas for improvements.

2.4 Development

2.4.1 Definition and Concept

Another organisational dimension which is present in an organisation’s culture and in particular to an LMX relationships, is the extent to which the development (of e.g. skills through learning or training) of a member is promoted and believed to add value. First the concept of development will be discussed along with the general importance thereof in an organisation. Then the connection between higher development of workers and their propensity to introduce new ideas (and hence to become more innovative) will follow.

In human resource management, training and development is defined as the field which is concerned with organizational activity aimed at bettering the performance of individuals and groups in organizational settings (Harrison, 2005). It has been known by several names, including human resource development, and learning and development (Harrison, 2005).

2.4.2 Importance of Development

Development of people’s skills and base of theoretical knowledge directly addresses their lack of prior education. It also makes employees feel valued since they are being invested in. This should increase their self esteem. This belief in employees reduces their fear of their supervisor and environment. It equips them with the thinking skills to approach a

challenge with the necessary knowledge, thereby encouraging them to take bigger risks without fear of failing. It develops their thinking such that they are more able to come up with creative new ideas on how to improve processes, products or services.

Apart from leading to innovation, Bezuijen, van Dam, van den Berg, and Henk (2010) cites numerous reasons why learning amongst workers is considered important. Some of them are job performance, staying current in a changing labour market, changing job requirements and the positive association of learning with job satisfaction, motivation and employee turnover (Bezuijen et al., 2010). Therefore it would be reasonable to suggest that a learning environment where workers are being developed should lead to happy workers who operate effectively and efficiently.

Arnolds et al. (2010) states that “training and career development opportunities satisfies important needs of blue collar workers and that it also drives job performance” (p. 91). The way in which the article recommends supervisors to incentivise workers to participate in training, is to clearly articulate its potential in career advancing opportunities for them. As a result of this learning and development, workers will be more advanced with regards to their thinking processes, thereby empowering them to make valuable contributions. Their desire to progress with their careers should then further motivate them to suggest new ideas for improvements.

2.4.3 Development and Innovation

The following section aims to establish some link between development and innovation - the willingness to introduce new ideas.

According to Ibrahim and Fallah (2005), innovations are the output of a knowledge creation process that is derived by the exchange of tacit and explicit knowledge. Development of say, skills through training, is the result of some form of knowledge exchange. Leaders play important roles in developing a learning organization (Bezuijen et al., 2010).

This learning is then further fostered within the relationship between the leader and member (Bezuijen et al., 2010). By this notion development should enhance innovation which can be as a result of exchange between a leader or organisation, and a member. Development of skills and education is also anticipated to empower individuals, increase their self confidence to make them more willing to take risks and introduce new ideas.

One kind of empowerment (an antecedent of organizational innovation) that Cakar and Ertürk (2010) speak of can also be interpreted as the development of members through learning experiences. This can be enabled by stimulating the sharing of information, since this is one of the most important tools of unleashing creativity (Cakar & Ertürk, 2010). According to De Jong and Den Hartog (2007), “innovative behaviour is closely related to employee creativity” (p. 43).

In Singh (2010), both the social impetus for innovation, as well as the extent to which organisational learning sets the foundation for effective operation of innovation is described. The article goes on to state that this learning which develops employees, should occur at all levels of the organisation (Singh, 2010). Therefore the impact that development of members through training and learning has on innovation should be significant at the shop floor level of manufacturing firms.

Innovation is also said to involve broad processes of knowledge sharing which facilitates the implementation of new ideas (Singh, 2010). Thereby the connection between development through knowledge sharing and likeliness to introduce new ideas and lastly innovation is made.

Kim and Park (2010) found that a firm’s science intensity has a positive direct effect on the impact of its innovation. The article describes how this scientific acumen is enhanced through learning and collaborative networking. Different types of development and education other than that of a scientific nature is also anticipated to empower individuals, and hence to contribute to overall organisational innovation, i.e. more skills are expected to lead to better innovation.

Schoeff (2006) describes how at Whirlpool Inc. it was found that factory floor workers responsible for ensuring that steel meets specifications have to be able to calibrate complicated equipment. This requires of them knowledge of mathematics comparable to algebra. This company often found that its employees lack these skills (Schoeff, 2006). Shop floor workers in manufacturing industries are therefore often required to do mathematical calculations in order to perform their jobs to standard.

Jacobs (2012) discusses how literacy, numeracy and critical thinking skills are needed for potential innovators to start their own business. In terms of innovation, skills and training shortcomings restrain African entrepreneurs, (Jacobs, 2012). Basic literacy and mathematical competency is therefore still regarded as enablers to innovation.

Many times, at short notice it is required to produce new prototypes or complex moulds for evaluation. Such once-off products require specific computer-based skills, such as programming CNC machine tools (“Capitalise on shop floor skills”, 2001). If such functions can be performed in-house, overall manufacturing performance and innovation is expected to be increased. Vice president of maintenance at Celadon truck load carriers, Mike Mills deem both mechanical and computer based skills necessary to maintain products in a fleet of trucks (Kilcarr, 2005).

Babyak (2006) describes that “As manufacturing becomes more technologically sophisticated, it demands an increasing number of high skill employees” (Babyak, 2006, p. 5). Such skills may include operating large and complex machinery, artisan skills or equipment handling and software programming skills.

Apart from the skills outlined above, team leaders should also invest the time and effort to explain work processes to their members. If employees are familiarised with different processes within a manufacturing plant, they are also expected to be in a better position to identify potential pitfalls of and improvements for those processes.

Mika (2007) encourages companies to let their employees out of their usual office environment to enable them to develop their ideas. In the hope to inspire employees to create bigger and better ideas than those that already exist; another useful technique is to

provide them with lots of information and reading material on the subject at hand (Mika, 2007). These are simple examples on how to develop employees with regards to learning and training, in order for them to become more innovative.

Another means of developing and facilitating learning of employees is to assign to them a mentor whose task it is to stimulate and transfer knowledge to the employee. Mika (2007) supports this concept regarding super mentors as drivers of innovation as the article reads: "When it comes to innovation, mentors play a key role, because they're the people who say, 'That's a great idea'" (Mika, 2007, p. 5). People's ability to introduce new ideas can therefore be developed by being encouraged and inspired by, and learning from a mentor.

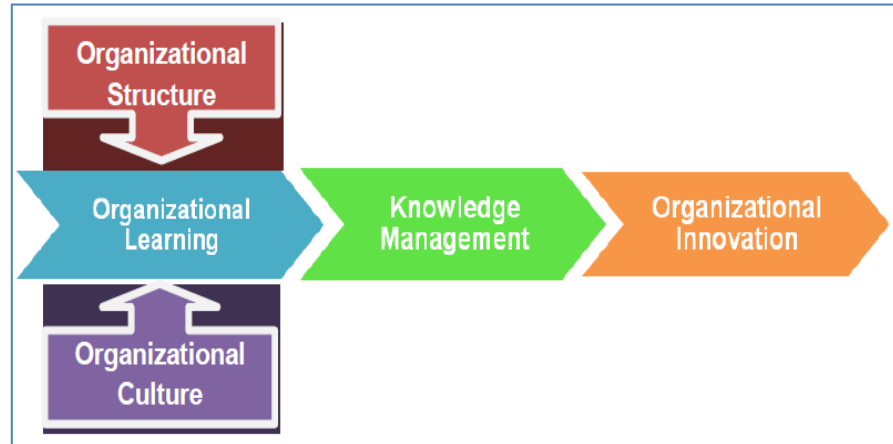
The source of a member's development as innovative worker may stem from the impact his/her supervisor has on them. In an article on employee innovative behaviour, Kanter states that employees are highly dependent on their supervisor's information, expertise and intelligence (Janssen, 2005).

But the leader's expertise and knowledge transfer abilities aren't enough to ensure development through learning. An employee's supervisor needs to create favourable conditions for observational learning to actually contribute to the observing employee's creativity (Zhou, 2003). By doing so the employee, "... not only properly acquires creativity-relevant skills and strategies, but also has the motivation to use these strategies to come up with creative ideas" (Zhou, 2003, p. 414).

Making the investment to develop employees goes along with spending resources such as time and effort. Kenny and Reedy (2003) found in their study that the investment in resources to train and educate staff was an important aspect of innovative companies. This research was however done on Irish manufacturing firms at the company level, as opposed to the individual level. The sample size was also small. Adding to this notion is the finding of Lin and McDonough III (2011) that a knowledge-sharing culture directly impacts on innovation ambidexterity.

The following model is developed by Singh (2010).

Figure 2.2: A proposed model for organisational innovation, (Singh, 2010, p. 721).



The theory suggests that organisational structure and culture have significant impact on shaping organisational learning. The latter then requires proper knowledge management practices to facilitate organisational innovation. This study still alludes to the innovation of the company, consisting of individuals operating at different levels. The link between innovative individuals which contribute to organisational innovation is already made in the innovation section of this research.

The article concludes with: “Organizational innovation depends upon the strengths of organizational learning capabilities as well as knowledge management practices which the firms have in place” (Singh, 2010, p. 722).

As a member develops, the extent to which their performance and contributions improve is also expected to be monitored by leaders. Low monitoring and high developmental feedback enables employees to not only come up with new creative ideas, but also to gain motivation to experiment with new ideas and thus become creative (Zhou, 2003).

Moreover, it has been found that less creative personalities benefit more (creatively) from these interventions than do more creative ones (Zhou, 2003). Therefore organisations will benefit significantly from developing the skills and knowledge of lower level workers in say factory environments who lack creativity.

Therefore, ultimately the goal should be exchange of useful knowledge leading to innovation (Fard, Rostamy & Taghiloo, 2009).

2.5 Inclusion

2.5.1 Definition and Link to Diversity

Inclusion describes which individuals are allowed to participate and are enabled to contribute fully to the group (Miller, 1998). The aim of this section of the review is to establish the relationship between inclusion of a member, and that member's willingness to introduce new ideas, i.e. to be innovative. Also important to this study are the links between inclusion and diversity.

The definition of diversity according to "The United States Air Force Diversity Strategic Roadmap" is, '...a composite of individual characteristics that includes personal life experiences, geographic background, socioeconomic background, cultural knowledge, educational background, work background, language abilities, physical abilities, philosophical/spiritual perspectives, age, race, ethnicity and gender" (Vila, 2009, p. 50).

Diversity describes the makeup of a specific group of individuals, (Miller, 1998). But diversity goes beyond gender and race, as it includes any dimension that differentiates people from each other. Nowadays generational differences are also significant (Toops, 2009).

Many leading American companies are pushing beyond the notion of diversity to embrace inclusion (Sweeny, 2009). When differences are regarded as valuable resources, as in a trusting inclusive environment, individual and group differences no longer need to be suppressed (Miller, 1998). The significant relationship between diversity and inclusion is illustrated in the following. The creation of an inclusive organisational culture requires the skills to manage a diverse work force (Vila, 2009). The necessity of references made to diversity when analysing inclusion is therefore made by this statement.

Differences should rather be seen as an asset as opposed to something that hinders progress, because having a diverse workforce can allow the organisation to align with the diversity of stakeholders, thereby providing the required skills to serve their different needs (Miller, 1998). Nowadays organizations even appoint chief diversity officers and embark on ambitious programs to drive diversity and embrace "inclusion" (Sweeny, 2009).

South Africa has many ethnic groups and is often referred to as the rainbow nation. Diversity at the shop floor level of manufacturing firms in South Africa manifests through the high demand of people to make a living for themselves and their families who are uneducated and less fortunate. Some of these groups include Indians, Coloured people and Africans who were previously excluded from formal education and socio-economic activities.

Achieving and maintaining such an environment is no mean feat. Building an inclusive organisation requires commitment to fundamental change in structures, behaviours, operating procedures, human resource systems, formal and informal reward systems, leadership practices, competency requirements, and the culture of the organisation (Miller, 1998). The management of diverse people and the effort to establish an inclusive environment is an ongoing, challenging process (Vila, 2012).

One way of getting overall organisational buy-in is to establish a compelling business case for an inclusive culture that embraces diversity (Sweeny, 2009). An example of such a case is the notion that an enhanced inclusive environment may be associated with a higher propensity to innovate. The effort to become more diverse and inclusive also requires a major commitment of time and resources, as well as a long-term strategic plan that transforms the organisational culture and a new way of doing business (Katz, 2002).

2.5.2 Importance of Inclusion

A good starting point for organisational transformation is the imperative for change. The importance of an inclusive organisational environment and culture is considered below. According to Sweeny (2009), promoting diversity and inclusion is ethically and morally the right thing to do. Katz (2002) suggests that an inclusive culture also has bottom-line

benefits and entails a new culture where all people are valued for their different perspectives, talents and abilities.

Another advantage is the resultant increased value of inputs from multiple sources of intellect. A group's input will usually out-think an individual's input (Sweeny, 2009). Inclusion increases the total human energy to the organisation, (Miller, 1998). Organisational strategic thinking, although usually designed and executed from the top, can also be influenced by the suggestions of employees at various echelons of the firm.

Therefore, diversity management is an essential component to overall business strategy, in that such practices enable the companies to: "...tap into diverse labour markets, compete with more innovative products and services, and market to more diverse customers" (Sweeny, 2009, p. 21).

Diverse perspectives will advance an organisation as a premier learning organisation, (Vila, 2012). In other words, an environment where the sharing of diverse perspectives are promoted, will enable its' members to learn from each other. The sharing of knowledge and learning however, is anticipated to be enhanced in an inclusive environment where more people are encouraged to participate.

Also, in the presence of inclusion, different voices are sought out and utilized as opportunities for added value. Different perspectives and frames of reference offer competitive advantage in teamwork, service delivery, product quality and work output. Surprisingly, only relatively few companies recognize diversity as a potential source of organisational effectiveness (Miller, 1998)

Diverse cultures are required in today's business environment, because many of today's problems are webs of complexity with numerous angles that must be explored (Miller, 1998). Businesses need cross-cultural competence—"the ability to discern and take into account one's own and others' world views to seize opportunities, make decisions and resolve conflicts in ways that optimize cultural differences for better, longer-lasting and more creative solutions," (Toops, 2009, p. 27).

These imperatives suggest that the benefits from establishing an inclusive environment go beyond morals and ethics. Therefore, we need to get to the place where diversity management and promoted inclusion is not merely seen a moral imperative but also an acknowledged prerequisite for excellence (Minor, 2011). Embracing diversity also shouldn't only be seen as an HR issue. The importance thereof should be seen as a business opportunity that can yield innovation (Toops, 2009).

It is apparent that diversity is something which countries and companies would want and strive for, to realise the benefits described above. South Africa is fortunate that it already has a diverse labour force. The goal for South African companies should therefore be to promote the inclusion of all its diverse employees in order to realise their potential as value adders.

2.5.3 Inclusion and Innovation

The next section will aim to shed some light on how promoting inclusion and embracing diversity relates to employees' propensity to suggest new ideas and to become more innovative. Yukl (2002) proposes that participative leadership can take different forms, including consultation, joint decision making and delegation. "Such leadership has been identified as an antecedent of individual innovation" (De Jong & Den Hartog, 2007, p. 45).

Of importance are the organizational benefits derived from greater innovation, creativity, and engagement due to an inclusive atmosphere and the unique perspectives provided by each ethnic and socio-cultural group (Vila, 2012).

In the De Jong and Den Hartog (2007) research study it was found that by consulting with members, the generation of ideas amongst those members was enhanced. These consultations included checking with employees before changes were incorporated that may affect them and incorporating their ideas and suggestions in decision. These actions relate to the inclusion of those employees (De Jong & Den Hartog, 2007).

Minor (2011) suggests that it is in diversity that one finds the foundation of innovation, discovery, and the creation of knowledge for the pursuit of truth is after all fundamentally

an exploration of competing claims and complementary ideas. To shut out alternative viewpoints is to limit possibilities for greater understanding (Minor, 2011).

A 2008 report on diversity in corporate America found that a genuinely diverse workforce "can be more innovative, flexible and productive" (Sweeny, 2009, p. 21). The article goes on to suggest that it is in diversity that we find the foundation of innovation, discovery, and the creation of knowledge. Inclusion enables contributions from a broader range of perspectives (Miller, 1998). The emphasis here lies in the variety of ideas as well as the way in which people's thinking processes differ.

De Jong and Den Hartog (2007) describe how participation in decision making, characteristic of inclusive cultures, is known to be a strong determinant of innovative behaviour. A shared leadership style motivates the generation of new ideas, which in turn has been found to enhance innovation (De Jong & Den Hartog, 2007).

In an article on collaboration, Gratton and Erickson (2007) suggest that the diverse knowledge of people from multiple backgrounds and perspectives and views can spark insight and innovation. However, if these people do not know each other or feel included, the sharing of knowledge will be impaired (Gratton, 2007).

In terms of innovation-enabling environments, Ferrari and Goethals (2010) describe how management experts prefer to talk about cooperation and collaboration, rather than competition within research and development centres. Whether this concept would hold true in other departments of an organisation such as the factory shop floor of a manufacturing firm is of interest to this study. It is reasonable to suggest that collaboration and cooperation are characteristics of inclusive relationships.

Pressures for and the benefits of organisational change fall into, amongst others, workforce issues. These include productivity and the value of innovation (Miller, 1998). This suggests that an inclusive environment is an antecedent of a transformed innovative culture.

Accelerating changes to workplace demographics and the need for innovation are driving businesses to re-examine their diversity policies and ramp up inclusion programs (Toops, 2009). Companies therefore already perceive the connection between the two constructs, and align their culture to build inclusion, leading to better innovation.

It is reasonable to suggest that by acknowledging people's unique individual attributes, they feel valued and inspired. The Johns Hopkins Summer Job program gives voice to diversity in the way they honour individuals and value ideas (Minor, 2011). This they found to enable many voices to compete and collaborate in ways that foster prosperity, democracy, and human rights (Minor, 2011).

Moreover, in contrast to diverse workforces and the added benefits of multiple stances, Miller (1998) suggests that mono-cultural environments end up being less creative than diverse ones in the long run.

Furthermore, in discussions on diversity and inclusion initiatives, the value of innovation is also stressed in Vila (2012). Corbette Doyle, lecturer of leadership and organisations at Vanderbilt University, provided recent examples of how a diverse workforce can lead to more innovative corporate thinking. Moreover, recent best-seller "The Difference" by Scott Page mathematically suggests that more diversity equals greater innovation (Toops, 1998).

To be innovative moving forward, the widest numbers of viewpoints need to be brought about (Sweeny, 2009). But when people are being frozen out or excluded from decision making and daily functions, new ideas get lost. The result of this is explained in Sweeny (2009) where Natalie Holder Winfield, a lawyer and author of *Recruiting and Retaining a Diverse Workforce* is cited as saying "When you don't have new ideas your organization will die" (p. 21).

Organisations are filled with barriers rooted in the culture that prevent people from contributing their ideas. To those they don't favour, the barriers can be discouraging. They can be as subtle as a leader forgetting a member's name or idea (Miller, 1998).

Strategies on how to promote inclusion of a diverse workforce include communicating across cultural differences, addressing disagreements that arise as people share their points of view and turning them into synergies (Katz, 2002). These are the only ways to unleash the power of diversity as a source of greater energy and innovation, quality and creativity (Katz, 2002).

Another way of viewing people in an organisation with the goal of creating an inclusive culture is given by Toops (2009). The article states that the key to successful diversity is moving from an attitude of “all about me” to “all about them,” and finally to “all about us”—an approach that makes both the majority and the minority part of the solution, or in other words, “...embracing a culture of inclusion” (Toops, 2009, p. 27).

The Miller (1998) article then goes further to explain some organisational change strategies (diagnoses and interventions) to transform from an exclusive to a more inclusive environment. The imperative for new viewpoints and how inclusion tends to promote the willingness thereof is a central thread in this article (Miller, 1998).

Practitioners generally also agree that diversity is an antecedent of innovation. For example, at a Capitol Hill Day in Chicago, where 28 engineering societies were present, the theme was “Diversity and Inclusion drives Innovation” (Patel, 2011). The key message at this event, organized by the society of woman engineers, was the need to expand minority participation in science, technology, engineering and mechanics. Another point made was that a diverse workforce will bring increased innovation to the country (Patel, 2011).

To elaborate on innovative capabilities at a national level, Prof. James Robinson from Harvard Business School describes in his 2012 book “Why Nations Fail” a similar concept. Prof. Robinson explained that nations that have inclusive political and economic institutions thrive. In contrast, nations that have extractive institutions where power and opportunity is concentrated in the hands of few, fail (Robinson, 2011). Institutions include financial, legal, political institutions. Also, those inclusive political institutions allowing broad participation drive successful inclusive economic institutions (Robinson, 2011).

Such markets draw ideas from a wider pool of diverse individuals, and the resultant contributions are consequently much richer.

From the above research on existing literature it can be inferred that by establishing an inclusive environment by embracing diversity, employees could become more willing to generate new ideas and also more innovative.

2.6 Conclusion

The purpose of the above literature review is to provide insight on how certain LMX constructs between supervisors and workers relate to innovation at shop floor level. Some reasons for the importance of innovation are given, as well as sources, e.g. employee creativity. An appropriate measure of innovation, i.e. the willingness to introduce new ideas was established. Numerous references were cited to indicate the extent to which innovation entails the suggestion of new ideas.

Some literature on LMX relationships and organisational culture was expanded on to describe the context in which the chosen constructs will develop. The quality of the exchange as well as the influence of the leader was found to be relevant factors that impacts on overall performance and innovation. The LMX section also touches on how other cultural dimension relating to interaction are correlated with innovation.

Due to the unique circumstances and attributes that characterize the typical South African shop-floor-worker-environment, the following constructs were analysed: trust, development and inclusion. These constructs are believed to address the needs of shop-floor workers, particularly their need for development of their innovative capabilities, and their willingness to come forward with new ideas.

After trust was defined, the difference between cognition-based trust (similar to ability-based trust) and affect-based trust (similar to benevolence-based trust) was explained. Thereafter, McAllister's (1995) views on how trust affects citizenship behaviour, as well as how trust enables the needs of peers being met were considered. Very relevant to this

research, De Jong and Den Hartog (2007) found that being supportive (typical of affect-based trust) is correlated with employees' generation of ideas.

Another means of trust was delved into; i.e. the enabling of knowledge sharing as a result of trust in a relationship, which ultimately facilitates innovation at the individual and firm level. The impact of trust between different parties inside and outside organisations was also explored. In terms of supervisor interaction, it was found that trust provides the social context in which member creativity can thrive.

Benevolence-based trust was briefly analysed in the literature review, in particular the extent to which the empathy a leader displays towards a member, may impact on the member's propensity to become innovative. Compassion and empathy alleviate stress experienced by employees.

This is particularly relevant in South Africa. Members often only start learning (which has been found to lead to innovation) from their superiors once they perceive that they are cared for by them. Furthermore, positive attitude displayed by supervisors has been cited to foster creativity and innovation in the workplace. It is therefore expected that empathy might be correlated to innovation.

The section on development relates to the personal development of workers through learning, training and knowledge diffusion. It was revealed that leaders play important roles in empowering a worker with tacit knowledge, and consequently enabling them to come up with better ideas. Favourable conditions are also required to facilitate learning, which in turn is suggested to contribute to an employee's levels of creativity. A knowledge sharing culture is therefore required for this.

In the study done between leaders and followers of companies in the Netherlands it was found that employees in high-quality LMX relationships appeared more eager to succeed with difficult learning goals by engaging in learning activities (Bezuijen et al., 2010). It would stand leaders in good stead to develop and maintain the quality of the LMX relationship, for this should result in members eager to learn, and consequently more willing to introduce new ideas.

The investment in resources, such as time, money and effort goes a long way, and the return as a result of employees' increased innovations unlocks value for organisations. Effective knowledge management practices found in an organisational culture which promotes learning and development of people should result in overall increased organisational innovation.

Another factor expected to be correlated to innovation is inclusion. Inherent to this is the concept of diversity and how it is embraced in organisations. The inclusion of diverse individuals could stand an organisation in good stead. By doing this, a wider selection of ideas can be drawn from employees who think differently. Thereby solutions to the needs of a changing complex world will be found more readily. Achieving such an environment can be difficult, and some strategies that may be implemented are mentioned.

Joint decision making, typical of in an inclusive environment has been established to be an antecedent of innovation. Moreover, the generation of ideas amongst members was also found to be enhanced when these members were consulted. By embracing diversity through inclusion, competing claims and complementary ideas are enabled to yield deeper understanding of problems and solutions. From various other sources it was further concluded that by creating an inclusive culture where diversity is embraced, employees become more willing to suggest new ideas, and also more innovative.

Many other attributes exist that characterises the relationship between a leader and his/her member. The constructs trust, development and inclusion have been chosen in the light of the South African context and in particular because of how they address the needs of shop-floor workers in the manufacturing industry.

The validity of the concepts and theories of this chapter will be tested and elaborated on in the remainder of this research study. The following chapter refines these arguments into three hypotheses regarding: trust, development and inclusion.



Chapter 3: Research Hypotheses

It has been ascertained in the literature review that a shop-floor worker's willingness to introduce new ideas directly contributes to their level of innovation. Moreover it was revealed that certain constructs of LMX such as trust, development and inclusion affect the propensity of shop-floor workers to introduce new ideas. What needs to be established is the extent and direction in which each of these constructs impact on shop-floor workers' willingness to introduce new ideas. It is from this enquiry that the following is hypothesized:

- Hypothesis 1: Higher levels of trust experienced by shop floor workers between their supervisors and themselves is positively correlated with their willingness to introduce new ideas

- Hypothesis 2: Higher levels of development experienced by shop floor workers is positively correlated with their willingness to introduce new ideas

- Hypothesis 3: Higher levels of inclusion experienced by shop floor workers is positively correlated with their willingness to introduce new ideas



Chapter 4: Research Methodology

This chapter discusses the research methodology and design that will be used to address the hypotheses stated in Chapter 3. This research will be based on the following data collection methodology:

4.1 Methodology

4.1.1 Research Design and Type

The study undertaken was quantitative and exploratory since no previous research was found to be conducted with regard to the relationship between the three constructs (trust, development and inclusiveness) and the willingness of shop floor workers of South African manufacturing firms to introduce new ideas. The current study is intended to identify which workers are willing to introduce new ideas. Moreover, it attempted to determine which dyads (supervisor/worker pairs), characterized in terms of the constructs identified, are correlated with the worker's propensity to introduce new ideas.

An overview of the methodology is presented in the following table:

Table 2.1: Research Methodology (Saunders, 2012)

Research Design	Quantitative
Research Type	Descriptive
Research Method	Survey Questionnaire (Likert 1 – 5)
Survey Type	Self Administered
Survey Technique	Personal Interview



4.1.2 Research Method, Technique and Tool

4.1.2.1 Population

The population consisted of all the shop floor workers and their supervisors in manufacturing firms in South Africa.

4.1.2.2 Shop-Floor workers and supervisors in South Africa

Two manufacturing firms in Gauteng, South Africa were approached. The supervisors and their shop floor workers were interviewed using questionnaires. The one firm is a very well established multinational organisation operating in the automotive industry, and the other is a local firm supplying products to the Telecommunications industry. The first is known for its innovation driven from all levels throughout the organisation, and the latter is seen as less innovative. The reason for this selection was to get variance in the data as well as a better spread of values for the regression. This was to get a better understanding of what drives innovation at shop floor level. Twelve supervisors, and in total 50 of their workers made up the 50 dyads.

4.1.2.3 Survey Design

The survey was designed to establish the relationship between each of the following;

- the trust between supervisor and worker,
- level of development of worker,
- level of inclusiveness experienced by worker,

and the worker's willingness to introduce new ideas. The literature review has produced rich findings with regards to these constructs, in particular to the extent to which these have been cited to contribute to innovation and the suggestion of new ideas.



The method used for data gathering was through personal interviewing of respondents. A structured questionnaire was used to guide the sessions. The questionnaire was comprised of four sections, each addressing one of the constructs. The questions were asked using a Likert-scale (rated 1 to 5) in order to assess at which level each construct is experienced either by a worker or a supervisor.

The reason why the interviews were conducted personally was because workers may have felt intimidated by the questionnaire, or may not have understood what some of the terms e.g. “innovative ideas” meant. By personally conducting the sessions it was also ensured that a higher response rate was achieved.

An interesting observation was that when workers were asked whether they would feel a sense of loss if their supervisor had to leave, the initial response was no. This often didn't tie up with the other questions addressing the trust construct. After addressing this due to scepticism, it was found that the reason was that the workers associated leaving with being promoted (as this was usually the case). Accordingly, they reported that they rather felt happy for their colleague's good success and progress instead of sadness for their departure. After explaining the question better the more appropriate answer was obtained.

Table 2.2. on the next page below displays the different questions asked to the supervisors and workers.



Table 2.2 Questionnaire for Supervisors and Shop Floor Workers.

TRUST (McAllister, 1995, p. 37):	1. Fully Disagree	2. Disagree	3. Neutral	4. Agree	5. Fully agree
<i>I can talk freely to this worker/supervisor about difficulties I am having at work and know that (s)he will want to listen.</i>					
<i>We have a sharing relationship. We can both freely share our ideas, feelings, and hopes.</i>					
<i>We would both feel a sense of loss if one of us was transferred and we could no longer work together.</i>					
<i>This worker/supervisor approaches his/her job with professionalism and dedication.</i>					
<i>Given this worker's/supervisor's track record, I see no reason to doubt his/her competence and preparation for the job.</i>					
<i>I can rely on this worker/supervisor not to make my job more difficult by careless work.</i>					
DEVELOPMENT:					
<i>The development of this worker is a primary focus of the organisation.</i>					
<i>This worker receives enough training to execute his/her job better.</i>					
<i>The training/learnings provided to the worker enhance his/her skills and knowledge (Boe, 2002, p. 68).</i>					
INCLUSION (Seopa, 2010)					
<i>The organisation provides this worker with an opportunity to participate in decision making (Seopa, 2010, p. 117).</i>					
<i>This worker has a strong sense of belonging to the organization (Seopa, 2010, p. 114).</i>					
<i>This worker is included in day to day operations.</i>					
WILLINGNESS TO INTRODUCE NEW IDEAS:					
<i>This worker introduces creative new ideas that result in improvements.</i>					
<i>This worker suggests new ideas often</i>					
<i>This worker introduces innovative ideas in a systemic way.</i>					
<i>This worker is very willing to introduce new ideas</i>					
<i>This worker is not scared to introduce new ideas</i>					
<i>This worker likes to introduce new ideas</i>					



The first three questions on trust addresses benevolence trust within the dyadic relationship and the latter three ability based trust.

Although all four constructs' responses were obtained from both supervisors and shop floor workers, the data relating to trust, development and inclusion taken from the workers will be used and compared to the data relating to the "new ideas" taken from the supervisor's stance.

First, the constructs identified in the literature review, i.e. (trust, development and inclusion of the worker) were determined by asking shop floor workers how they perceive these constructs with regards to their supervisor. Thereafter each supervisor was approached and required to rate their subordinates in terms of the last construct; i.e. the worker's willingness to introduce new ideas. This method was employed to avoid the common method bias, i.e. bias due to: "...variance that is attributable to the measurement method rather than to the constructs the measures represent" (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003, p. 879).

This resulted in four sets of data containing approximately 50 supervisor/shop floor worker data points. The reliability of the instrument will be tested by determining Cronbach's Alpha, a reliability coefficient that measures inter-item reliability or the degree of internal homogeneity between variables measuring one construct/concept (Thanasegaran, 2009). Nunnally and Bernstein (1994) suggest that in the social sciences, acceptable reliability estimates range from 0.70 to 0.80 (Thanasegaran, 2009). The data-sets will then be analysed using analytical tools and techniques. In particular some amongst other, correlation and regression analyses will be performed.

The analysis will include:

- the correlation between each of the first three constructs, with the willingness of the shop floor workers to introduce new ideas



In each of the correlation analyses, each data point will be compared to a data point relating to the same supervisor/shop floor worker combination. E.g. Worker X's score for trust on the part of Supervisor Y will be compared to Supervisor Y's score for willingness to introduce new ideas on the part of Worker X.

4.1.2.4 Control Variables

The following control variables are known to have an effect on innovation and were therefore included in the survey. E.g. younger people or employees who haven't worked at the organisation for long might be more willing to prove themselves by making new suggestions. More educated employees might feel more confident in their knowledge base and may therefore also be more willing to introduce new ideas. Another motivation for the use of these variables is that demographics describe diversity as well. Since the link between inclusion and diversity was established, these variables become relevant.

- Age
- Race
- Gender
- Education
- Tenure
- Job level

4.2 Unit of analysis

The unit of analysis was the relationship between a South African shop floor worker and his/her supervisor working in a manufacturing firm. The relationships between the stated constructs (trust, development and inclusion) of the 50 different dyads (Leader-Member) were analysed in terms of how it is correlated to the worker's willingness to introduce new ideas.



4.3 Sampling Method

The selection of the individuals (shop floor workers and their supervisors) in the company to be interviewed was based on a quota sampling method as proposed in Saunders and Lewis (2012). This was done in order to have a representative sample typical of the population. The sample included 12 supervisors and 50 workers in total under them. This results in a dataset of 50 paired samples (dyads).

4.4 Scope and Universe

Supervisors and their shop floor workers from manufacturing companies in South Africa were researched. The four constructs mentioned above and in particular the correlation between the first three constructs and the worker's willingness to introduce new ideas (which is suggested to contribute to innovation) formed part of the core of the research objectives.

4.5 General Findings

Whilst approaching workers and requesting them to participate in this exercise, some interesting things came to the fore. At first many of them seemed apprehensive at first. Since a complete stranger was about to investigate aspects relating to their relationship with their leader, this did not come as a surprise. After a couple of interviews it became apparent that in order to gain their trust and build rapport, one should interact with them in a particular way.

In essence, since most workers were of African descent, the correct approach was to embrace the principles of "*ubuntu*", i.e. the capacity in African culture to express compassion, reciprocity, dignity, humanity and mutuality in the interest of building and maintaining communities with justice and mutual caring (Bekker, 2006).



By showing an interest in their lives and assuring them that they are in a safe and confidential space, these workers became a lot more willing to participate in the interview. It was gratifying that most of the workers left the interview with a sense of being valued.

4.6 Research Limitations

- 1) Due to time and other constraints only a finite amount of individuals (12 supervisors and 50 shop floor workers) was consulted for datasets.
- 2) The research was conducted in English, which is likely to be a second language for most respondents.
- 3) Self-reported questionnaires may result in biased responses, although the use of a second (supervisory) set of respondents helped mitigate this.

Chapter 5: Results

This chapter discusses the findings from the data collection process, as well as the results from the analytical and statistical tests performed on the gathered data. The data is made available in an annex on a compact disk. The statistical tests and procedures were performed with the aid of a software package called SPSS.

5.1 Responses

The total number of responses to this survey was 100. This included 12 supervisors who among them led 50 shop floor workers. Therefore a total of 50 dyadic responses were obtained. One dyadic response includes a completed questionnaire from a supervisor and one from a worker. These two questionnaires relate to constructs discussed in Chapter 2 with regards to that specific dyad. All of the responses met the criteria of shop floor workers and supervisors working in manufacturing firms in South Africa.

5.2 Demographics

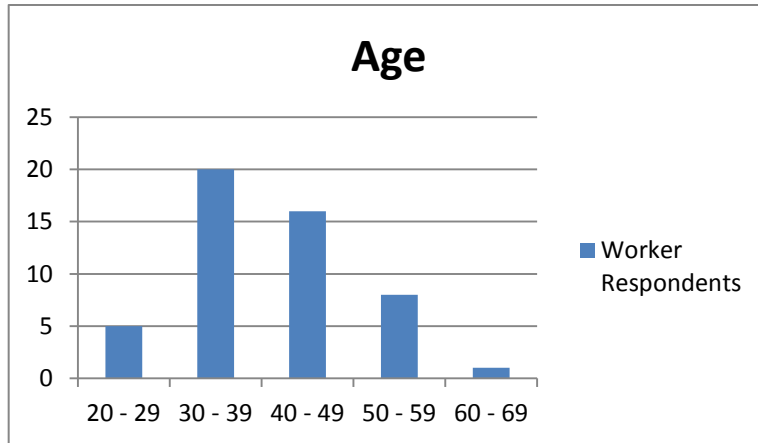
5.2.1 Control Variables

The control variables provide an overview of the characteristics that make up the sample population interviewed (i.e. the workers and their supervisors). Five features examined were age, race, gender, language, education and tenure. The particulars of the workers will be reviewed henceforth.

5.2.2 Age

The sample had an age range from 22 to 60, with the majority of the respondents in their thirties and forties. As can be seen from the below figure the ages have been grouped into blocks of 10 years.

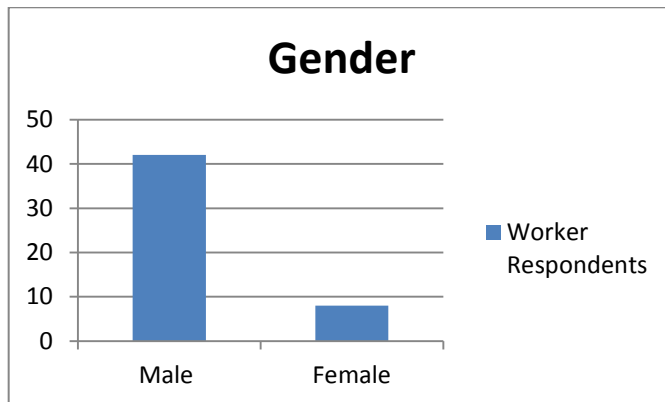
Figure 5.1 Distribution of age amongst worker respondents



5.2.3 Gender

Typical of manufacturing firms in South Africa, relatively few women (only 14%) were found in the sample. The proportions relating to gender are shown in Figure 5.3 below.

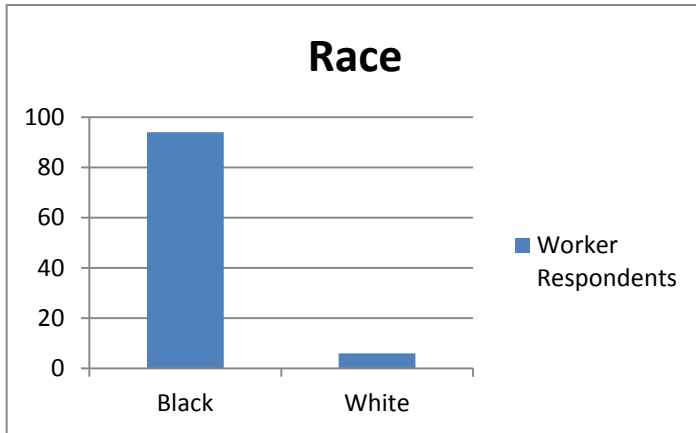
Figure 5.2 Distribution of gender amongst worker respondents



5.2.4 Race

The general assumption that most South African shop floor workers are black Africans was found to be consistent with the respondents' race. Only 6% of the workers were white and the remaining 94% black. This is shown in Figure 5.2 below.

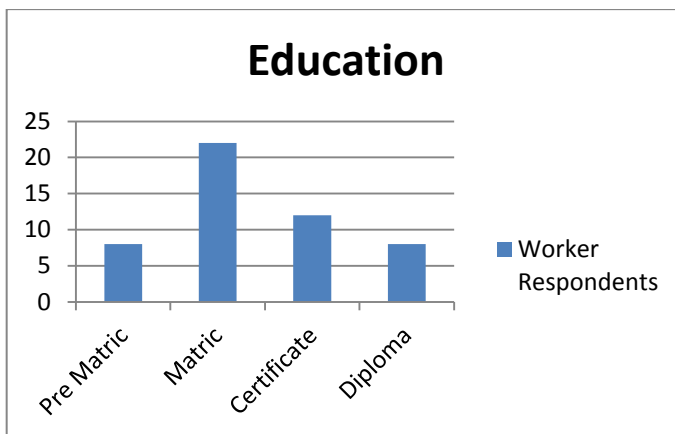
Figure 5.3 Distribution of gender amongst worker respondents



5.2.5 Education

The majority of the workers interviewed only have a matric (grade 12) level of education. No respondent was found to have any qualification higher than a three year diploma. Some of the workers didn't finish school. Figure 5.4 shows the distribution on the sample education.

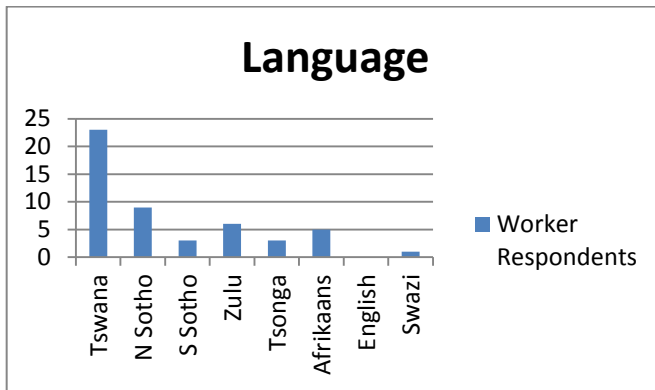
Figure 5.4 Distribution of levels of education amongst worker respondents



5.2.6 Language

Because of the region of South Africa (Gauteng) where the sample was taken from, the majority of the worker respondents' first language was either Tswana or Northern Sotho. These two languages are very similar to each other.

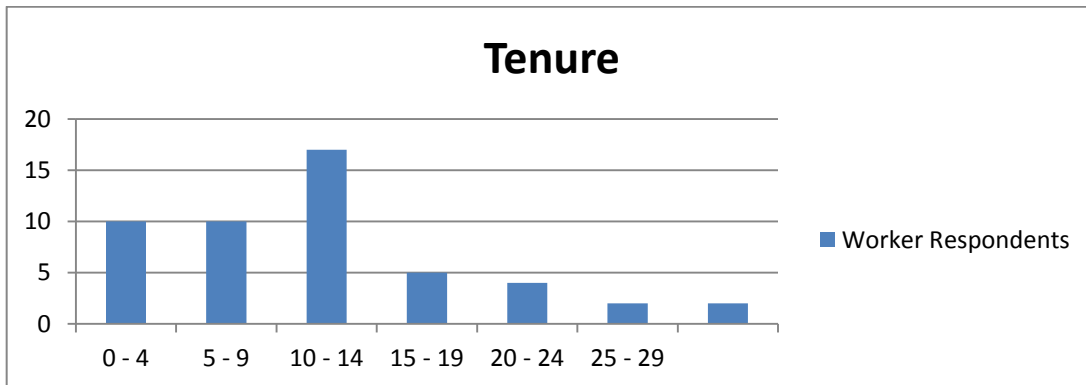
Figure 5.5 Distribution of language amongst worker respondents



5.2.7 Tenure

Some of the respondents interviewed had worked at their companies in excess of 25 years. The majority however have worked in their companies for between five to fifteen years. The spread of tenure values received should provide a good representation of the population and should also give variance to the results.

Figure 5.6 Distribution of tenure amongst worker respondents



5.3 Cronbach's Alpha

The reliability of results from the survey was tested using Cronbach's Alpha. The extent to which each set of questions address the different constructs consistently is shown in Table 5.1 below. As can be seen, all Cronbach's Alpha's are above 0.64, with the majority above 0.8.

Table 5.1 Final Survey Cronbach's Alphas

Construct	Questions	Cronbach's Alpha	Number of Items
Trust (Worker Perspective)	Q1, 4, 5, 6	0.69	4
Development (Worker Perspective)	Q1- 3	0.80	3
Inclusion (Worker Perspective)	Q1 – 3	0.68	3
Willingness to introduce new ideas (Worker Perspective)	Q1 – 6	0.83	6
Trust (Supervisor Perspective)	Q1 – 6	0.83	6
Development (Supervisor Perspective)	Q1 – 3	0.81	3
Inclusion (Supervisor Perspective)	Q2 & Q3	0.64	2
Willingness to introduce new ideas (Supervisor Perspective)	Q1 – 6	0.93	6

In order for the trust (worker perspective) construct to achieve an acceptable level, items two and three had to be omitted. In order for the inclusion (supervisor perspective) to be acceptable, item one had to be omitted.

5.4 Normality and Descriptive Statistics

The constructs identified in the hypotheses of chapter three will now be reviewed. The average of each set of questions addressing a construct was taken as the value for that construct

Tests for normality were also performed. All significance levels were found to be less than 0.05. The implication of this is that all assumptions of normality are violated. Normality is expected to improve with larger sample sizes. Due to time and accessibility constraints only 50 dyads were interviewed. Also worth mentioning are the rather large values of negative skewness in Table 5.2 which alludes to the lack of normality. Table 5.2 below shows all the relevant statistical descriptives of the different constructs under review.

Table 5.2 Descriptive Statistics for the Constructs under Review

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Trust (Worker Perspective)	50.000	2.750	5.000	4.230	0.525	-1.064	0.337	1.179	0.662
Development (Worker Perspective)	50.000	1.667	5.000	3.800	0.964	-0.396	0.337	-1.050	0.662
Inclusion (Worker Perspective)	50.000	1.667	5.000	3.753	0.776	-0.793	0.337	0.295	0.662
Willingness (Worker Perspective)	50.000	2.500	5.000	4.037	0.541	-0.705	0.337	0.299	0.662
Trust (Supervisor Perspective)	50.000	2.833	5.000	4.240	0.530	-0.511	0.337	-0.045	0.662
Development (Supervisor Perspective)	50.000	1.333	5.000	3.813	0.839	-1.027	0.337	0.909	0.662
Inclusion (Supervisor Perspective)	50.000	3.000	5.000	4.290	0.506	-0.289	0.337	0.078	0.662
Willingness (Supervisor Perspective)	50.000	1.833	5.000	3.827	0.722	-0.923	0.337	0.715	0.662
Valid N (listwise)	50.000								

Most relevant are the mean values and how they compare between worker and supervisor results. Notably, the constructs of inclusion and willingness have different means when worker and supervisor sample results are compared. The statistical significance of these differences will be assessed in the section that follows.

5.5 Construct T-Tests

T-Tests were performed on the independent samples to determine whether the differences in mean are coincidental or whether they are statistically significant (i.e. belong to the same population).

Regarding Levels of Significance (p-values):

- Marginally significant: $p < 0.1$
- Moderately significant: $p < 0.05$
- Highly significant: $p < 0.01$

The results are given in Table 5.3 below:

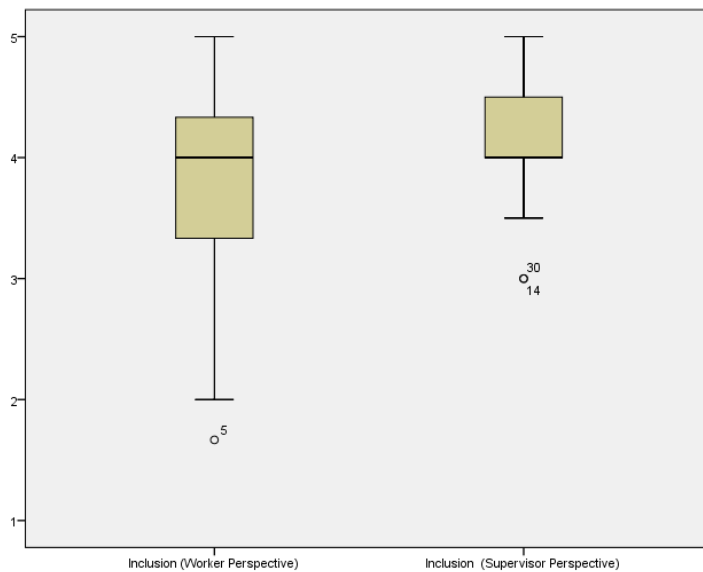
Table 5.3 T-tests of supervisor and worker samples to evaluate significance in mean differences

		Independent Samples Test								
		Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	of the Difference	
								Lower	Upper	
Trust	Equal variances assumed	.411	.523	-.095	98	.925	-.0100000	.1054953	-.2193519	.1993519
	Equal variances not assumed			-.095	97.988	.925	-.0100000	.1054953	-.2193523	.1993523
Development	Equal variances assumed	5.265	.024	-.074	98	.941	-.0133333	.1807417	-.3720094	.3453428
	Equal variances not assumed			-.074	96.159	.941	-.0133333	.1807417	-.3720953	.3454286
Inclusion	Equal variances assumed	7.909	.006	-4.096	98	.000	-.5366667	.1310216	-.7966748	-.2766585
	Equal variances not assumed			-4.096	84.282	.000	-.5366667	.1310216	-.7972048	-.2761285
Willingness	Equal variances assumed	3.154	.079	1.646	98	.103	.2100000	.1276199	-.0432576	.4632576
	Equal variances not assumed			1.646	90.839	.103	.2100000	.1276199	-.0435074	.4635074

Chapter 5: Results

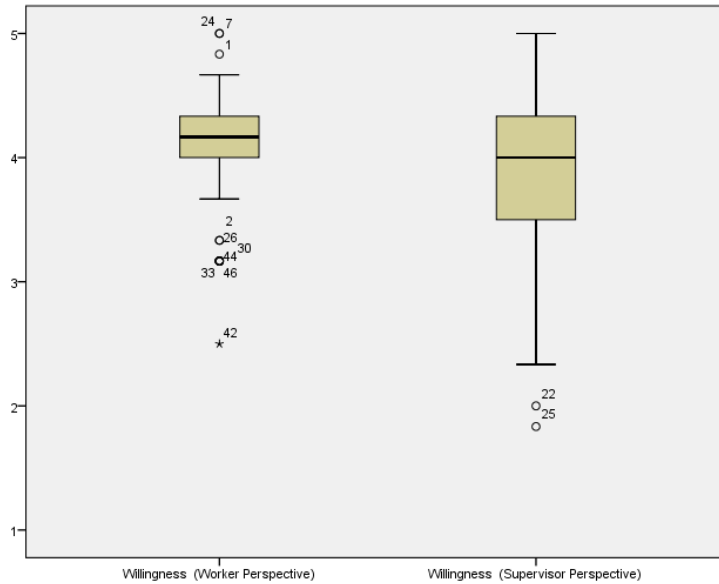
Where Levene’s test provides a significance level of below 0.05 equal variances can be assumed, otherwise the unequal variances assumed results are appropriate. As can be seen in the table above the levels of inclusion experienced from the workers perspective were found to be less than those perceived by supervisors with high levels of significance. See Figure 5 for a better visual depiction of the differences in worker and supervisor inclusion samples.

Figure. 5 Visual Depiction of the found Differences in Inclusion perceived by Workers (left) and Supervisors (right).



Conversely workers’ perceptions of their levels of willingness to introduce new ideas were found to be higher than perceived by supervisors. Here the level of significance was marginal.

Figure. 6 Visual Depiction of the found Differences in Worker’s Willingness to introduce new Ideas perceived by Workers (left) and Supervisors (right).



5.6 Factor Analysis

A factor analysis was performed on the aforementioned constructs. The aim hereof is to reveal any latent variables that cause the manifest variables to covary, therefore only shared variance appears in the solution (Costello & Osborne, 2005). A factor analysis can be performed to establish relationships amongst certain variables which load together strongly.

Table 5.4. Factor Analysis Output for the different Variables

	Factor			
	1	2	3	4
Development (Supervisor Perspective)	-.998	.102	-.299	.219
Trust (Supervisor Perspective)	.141	.942	.162	.246
Inclusion (Supervisor Perspective)	-.374	.622	-.158	.063
Willingness (Supervisor Perspective)	-.035	.498	-.125	.039
Age (Worker)	.212	-.090	.912	.113
Tenure (Worker)	.081	.005	.869	.106
Education (Worker)	-.415	.159	-.656	.240
Inclusion (Worker Perspective)	-.244	.106	.092	.827
Trust (Worker Perspective)	.007	.114	.049	.588
Development (Worker Perspective)	-.448	.143	-.178	.469
Willingness (Worker Perspective)	-.273	-.052	-.075	.300

Extraction Method: Maximum Likelihood.

Rotation Method: Oblimin with Kaiser Normalization.

When analysing the constructs using a factor analysis the following constructs loaded strongly together:

- Trust (SP), Inclusion (SP) and Willingness (SP).
- Trust (WP), Inclusion (WP), Development and Willingness (WP)
- Age and Tenure of Workers
- Education and Development (WP)

5.7 Construct Correlations

Correlations amongst all eight constructs were performed and are displayed in Table 5.4. In particular interest is focussed on those correlations addressing the research problem and hypotheses of this project. Table 5.4 below exhibits the different Spearman's correlations with their respective levels of significance.

Table 5.5. Correlation Output of all the relevant LMX Construct Variables

			Trust (WP)	Development (WP)	Inclusion (WP)	Trust (SP)	Development (SP)	Inclusion (SP)	Willingness (WP)	Willingness (SP)
Spearman's rho	Trust (WP)	Correlation Coefficient	1.000	.312*	.430**	.081	.036	-.008	.076	.033
		Sig. (2-tailed)		.027	.002	.575	.805	.955	.602	.822
		N	50	50	50	50	50	50	50	50
	Development (WP)	Correlation Coefficient	.312*	1.000	.351*	.089	.347*	.212	.123	-.176
		Sig. (2-tailed)	.027		.013	.539	.014	.140	.396	.221
		N	50	50	50	50	50	50	50	50
	Inclusion (WP)	Correlation Coefficient	.430**	.351*	1.000	.156	.256	.013	.233	-.064
		Sig. (2-tailed)	.002	.013		.279	.073	.927	.104	.658
		N	50	50	50	50	50	50	50	50
	Trust (SP)	Correlation Coefficient	.081	.089	.156	1.000	-.046	.488**	-.110	.459**
		Sig. (2-tailed)	.575	.539	.279		.753	.000	.448	.001
		N	50	50	50	50	50	50	50	50
	Development (SP)	Correlation Coefficient	.036	.347*	.256	-.046	1.000	.496**	.080	.130
		Sig. (2-tailed)	.805	.014	.073	.753		.000	.582	.369
		N	50	50	50	50	50	50	50	50
	Inclusion (SP)	Correlation Coefficient	-.008	.212	.013	.488**	.496**	1.000	.141	.328*
		Sig. (2-tailed)	.955	.140	.927	.000	.000		.328	.020
		N	50	50	50	50	50	50	50	50
	Willingness (WP)	Correlation Coefficient	.076	.123	.233	-.110	.080	.141	1.000	.007
		Sig. (2-tailed)	.602	.396	.104	.448	.582	.328		.959
		N	50	50	50	50	50	50	50	50
	Willingness (SP)	Correlation Coefficient	.033	-.176	-.064	.459**	.130	.328*	.007	1.000
		Sig. (2-tailed)	.822	.221	.658	.001	.369	.020	.959	
		N	50	50	50	50	50	50	50	50

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

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

Since only 50 data points per variable were attained, and since the distributions didn't yield high levels of normality (i.e. rather skewed), it was decided to use Spearman's Correlation

instead of Pearson's Correlation. The reason therefore is because Spearman's rank order correlation analysis is non-parametric, and also distribution free in its' assumptions.

- Trust (SP) & Willingness (SP): Correlation = 0.459; high significance
- Inclusion (SP) & Willingness (SP) : Correlation = 0.328; moderate significance

Some other significant results worth mentioning:

- Trust (WP) and Development (WP): Correlation = 0.312; moderate significance
- Trust (WP) and Inclusion (WP): Correlation = 0.430; high significance
- Inclusion (WP) & Development (WP): Correlation = 0.351; moderate significance
- Development (SP) and Development (WP): Correlation = 0.347; moderate significance
- Development (SP) & Inclusion (SP): Correlation = 0.496; high significance
- Trust (SP) and Inclusion (SP): Correlation = 0.488; high significance

(SP = Supervisor Perspective)

(WP = Worker Perspective)

In social-science research, the following classification of correlation coefficients is commonly used:

- a weak relationship is present if Tau-B is less than plus or minus 0.10
- a moderate relationship is present if Tau-B is between plus or minus 0.10 and 0.25
- a strong relationship is present if Tau-B is greater than plus or minus 0.25

5.8 Construct Linear Regression

In order to evaluate the entire effect that all of the aforementioned constructs have on a workers willingness to introduce new ideas, a linear regression was performed. First the effect of some control variables (age, tenure, race, gender and education) already discussed above was analysed. Thereafter the effect from the worker perceived constructs were added. Lastly the effects from the supervisor perceived constructs were added. This

was done in order to evaluate if any variance in the dependant variable, i.e. willingness to introduce new ideas, can be explained by all these independent variables.

Table 5.6 Education Codes

Pre-Matric	0
Matric	1
Certificate	2
Diploma	3

- Gender was coded males = 0; female = 1
- Race was coded black = 0; white = 1

The results from the regression analysis are presented Table 5.7.

Table 5.7 Summary of regression model

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.194a	.038	-.072	.7476356
2	.311b	.097	-.080	.7503668
3	.618c	.381	.202	.6449167

The R-Squared value above indicates the amount of variability in the dependent variable. The adjusted R-Squared value is adjusted for the number of explanatory variables used in the model. Table 5.5 shows that with all three groups of predictive variables added (control variables and construct variables), 20.2% of the variance in the dependable variable is explained.

Table 5.8 Analysis of Variance with significance Levels

ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	.959	5	.192	.343	.884b
Residual	24.594	44	.559		
Total	25.553	49			
2 Regression	2.468	8	.309	.548	.813c
Residual	23.085	41	.563		
Total	25.553	49			
3 Regression	9.748	11	.886	2.131	.042d
Residual	15.805	38	.416		
Total	25.553	49			

As can be seen in the ANOVA table above, model three is significant in explaining a portion of the variance in the dependable variable.

In table 5.9 on the next page the results obtained from the multiple linear regression analysis is set out.

From the regression output it can be seen that only two constructs are of significance. Most notable is the trust from the supervisor's perspective construct variable at significance level 0.003 (high). The standardized beta coefficient is 0.629, which means that higher levels of trust perceived by the supervisor, manifests in higher levels of willingness of worker to introduce new ideas also perceived by the supervisor. Specifically, for every unit change in trust, 0.629 units of willingness change in the same direction.



Table 5.9 Multiple Linear Regression Results containing three combinations of control and construct variables.

Model	Unstandardised Coefficients		Standardized Coefficients	T	Sig.	
	B	Std. Error	Beta			
1	(Constant)	4.116	.830		4.961	.000
	Age (Worker)	-.013	.022	-.157	-.580	.565
	Race (Worker)	.003	.463	.001	.007	.995
	Gender (Worker)	-.159	.291	-.081	-.545	.589
	Education (Worker)	.084	.139	.111	.606	.548
	Tenure (Worker)	.011	.024	.117	.468	.642
2	(Constant)	4.078	1.196		3.408	.001
	Age (Worker)	-.022	.023	-.273	-.966	.339
	Race (Worker)	-.076	.511	-.025	-.149	.883
	Gender (Worker)	-.144	.292	-.074	-.494	.624
	Education (Worker)	.110	.150	.144	.730	.469
	Tenure (Worker)	.019	.025	.200	.762	.450
3	Trust (Worker Perspective)	.200	.257	.145	.778	.441
	Development (Worker Perspective)	-.192	.130	-.257	-1.479	.147
	Inclusion (Worker Perspective)	.047	.177	.050	.263	.794
	(Constant)	.162	1.444		.112	.911
	Age (Worker)	-.008	.020	-.102	-.411	.683
	Race (Worker)	.579	.469	.192	1.233	.225
	Gender (Worker)	-.373	.258	-.191	-1.444	.157
	Education (Worker)	.021	.138	.028	.154	.878
	Tenure (Worker)	-.005	.023	-.057	-.235	.815
		B	Std. Error	Beta	T	Sig.
	Trust (Worker Perspective)	.186	.225	.135	.826	.414
	Development (Worker Perspective)	-.197	.119	-.263	-1.652	.107*
Inclusion (Worker Perspective)	-.067	.157	-.072	-.424	.674	
Trust (Supervisor Perspective)	.856	.266	.629	3.219	.003**	
Development (Supervisor Perspective)	.176	.167	.205	1.058	.297	
Inclusion (Supervisor Perspective)	-.008	.267	-.005	-.029	.977	

a. Dependent Variable: Willingness of Worker to introduce new Ideas (Supervisor Perspective)

The other less significant construct is the development perceived by supervisor variable which is slightly significant, i.e. 0.107. The standardized beta coefficient for this variable is -0.263, which means that higher levels of development perceived by the supervisor, manifests in lower levels of willingness of worker to introduce new ideas also perceived by the supervisor. Specifically, for every unit change in development, 0.263 units of willingness of worker to introduce new ideas change in the opposite direction (i.e. adverse effect).

The entire combination of variables however does however yield the 0.042 level of significance expressed in the ANOVA table.

The analysis from the above results will be analysed in the following chapter.



Chapter 6: Discussion of Results

The aim of this research was to understand what the impact of certain constructs of LMX (trust, development and inclusion) is on the willingness of shop floor workers to introduce new ideas. The original hypotheses were:

- Hypothesis 1: Higher levels of trust experienced by shop floor workers between their supervisors and themselves is positively correlated with their willingness to introduce new ideas
- Hypothesis 2: Higher levels of development experienced by shop floor workers is positively correlated with their willingness to introduce new ideas
- Hypothesis 3: Higher levels of inclusion experienced by shop floor workers is positively correlated with their willingness to introduce new ideas

6.1 Significant Construct Results and Interpretations

Regarding the first hypothesis, it was found that trust from the supervisor's perspective was positively correlated with the willingness of the worker to introduce new ideas perceived by the supervisor. This correlation is also strong since levels of correlation above 0.4 are regarded as strongly correlated in the social sciences.

Certain modes of behavioural interaction like being patient and helpful, listening, and looking out for someone's interests should problems arise, are typical of trusting relationships. These modes were found to be positively correlated with employees' generation of new ideas (De Jong & Den Hartog, 2007). Such relationships set a context in which workers feel safe and comfortable and even more confident and encouraged to speak up and make their ideas heard.

Supportiveness, another attribute of trusting relationships is also known to be positively associated with workers becoming innovative. Janssen (2005) agrees with this when



suggesting that trust and in particular support is required to encourage innovative workers and increase their willingness to speak up and introduce their creative new ideas.

In contrast it could be well expected that workers would feel less enthusiastic in suggesting their ideas if they are used to be scrutinized and unfairly criticized before being given a chance to prove their worth. Also a supportive leader should make his members feel less afraid of failing, giving them even more flexibility to stretch their imaginations further and bring about brighter ideas.

Not only the level of willingness, but the frequency thereof was enquired. The novelty and creativity of the suggestions and the extent that it results in improvements were also investigated in the interview. Since, according to Madjar and Ortiz-Walters (2009), supervisor trust provides the social context which enhances creativity, the above positive correlation is further supported by theory.

In addition, positive deviance refers to the expression of empathy and benevolence-based trust behaviours towards a team member. This should therefore further add to the willingness of workers to introduce new ideas since "...leaders who facilitate positive deviance in the workplace cultivate more innovation and creativity" (Pavlovich & Krahnke, 2011, p. 6).

Another interpretation of this could be that if a worker feels this goodwill extended towards him/her from their leader, worker loyalty may be bred. The worker's response might then very well be to reciprocate to the leader by contributing ideas that will be to the benefit of the product, process and ultimately the organisation.

Shop floor workers and supervisors constitute some of the vital parts of an organisation. According to Dervitsiotis (2006, p. 804), sufficient trust is required among these parts in order to develop and communicate new ideas. Only thereafter can investments be made to commercialise the new products and technologies as a result thereof (Dervitsiotis, 2006). In this article, Handy (1993) suggests that in a quest to meet business challenges through innovation, it is also much cheaper to facilitate innovation through trust building.



Trust can therefore be seen as the social lubricant required to facilitate organisational benefits. Besides all the other benefits derived from it, building trusting LMX relationships is therefore also an efficient means towards innovation.

The study done by Chowdhury (2005) provides empirical evidence of trust having positive influence on knowledge sharing within dyads in a team. Suggesting a new idea can be a form of knowledge sharing. Moreover, supervisors (or team leaders as they are often referred to) and workers work together within teams. Therefore the Chowdhury (2005) results concur with the findings of this study on shop floor workers in manufacturing firms in South Africa.

In order to facilitate creative ideas from workers, Madjar and Ortiz Walters (2009) encourage managers to develop trusting relationships with their subordinates. In this case supervisors play the role of managers to their workers or subordinates. In particular Kohtamäki, Kekäle and Viitala (2004) posits that at later stages within relationships, “...when trust is merely based on structures and continuity, the lack of interpersonal trust discourages people to talk about their big ideas” (p. 86). Therefore it may be inferred that both cognition- and affect-based trust is required to push employees to make their ideas heard.

Also, in order to contract the most valuable ideas from one’s member it is required to continue working on the trust one has with a member for the entire duration of the relationship. As in any realm of life, work relationships require ongoing work. This should not be seen as a burden or a hassle, since the benefits of a pleasant working environment, employee commitment and derived innovation have been found to be results thereof.

The correlation that the trust variable from the worker’s perspective had with the worker’s willingness to introduce new ideas unfortunately yielded no significant results. Therefore no strong inferences may be made from the result. A larger sample and a more normal set of distributions may deliver better significance levels in future. Another reason why the trust variables significance wasn’t higher might be ascribed to the fact that there wasn’t differentiated between ability and benevolence based trust in the questionnaire.



In terms of the tests done on the development variables the emphasis was on the development of workers skills and knowledge through training and learning. No levels of significance were achieved during the data analysis. Therefore no inferences regarding the relationship between the development of workers and their propensity to introduce new ideas can be made. However strong references to theory have been made that development of workers should lead to their becoming more innovative. One example is that innovation is also said to involve broad processes of knowledge sharing which facilitates the implementation of new ideas (Singh, 2010).

A plausible explanation for why no levels of significance were obtained and why such relatively large standard deviations were obtained may have to do with the following. In a group of workers one may find a sub-group that are high performers, and another subgroup who are low performers. Similarly one may find two groups that differ with regard to their knowledge bases or level of skills development. This may be because of certain individuals' aptitude to learn, relationship with their leader/mentor, or perhaps their attitude towards the workplace. Such scenarios will give rise to higher variance in the sample and could also lead to non-normal distributions.

The inclusion construct yielded some more significant results. Addressing hypothesis three, the results indicate that the inclusion of the worker perceived by the supervisor was positively correlated with willingness of the worker to introduce new ideas perceived by the supervisor. From the literature review it was inferred that the sharing of knowledge is anticipated to be enhanced in an inclusive environment, i.e. an environment where people feel part of the team and are therefore encouraged to participate, e.g. to be allowed to make suggestions. Moreover, Toops (2009) suggests that driving inclusion is important for business because of the derived benefits of innovation.

When workers feel a sense of belonging to a team, they may very well feel like their own ideas also belong to the team. They may accordingly make those ideas known to the rest of the team in order to reciprocate the inclusion facilitated by their leaders. Also members may feel that since they are now part of the team and since they are appreciated for who



they are, they should speak up and suggest ideas that would strengthen intellectual capital and improve overall team performance.

Egan (2011) suggests that "...the best way to ensure the development of new ideas is through a diverse and inclusive workforce" (p. 19). A diverse and inclusive workforce is needed to drive innovation, further creativity, and guide strategies of business. The reason for this is that "...multiple voices lead to new ideas, new services, and new products, and encourage out-of-the-box thinking" (Egan, 2011, p. 19). This ties in well with results which have indicated that enhancing inclusion through embracing diversity has a positive impact on a workers willingness to introduce new ideas. People who approach problem solving from different perspectives are bound to come up with more authentic solutions than a homogenous workforce.

In Shirley Engelmeier's book, 'Inclusion...The New Competitive Business Advantage', the author describes inclusion as follows: "Inclusion means creating a safe, collaborative environment that supports mutual understanding and different perspectives." Engelmeier (2012, p. ix) also makes the connection that "...today diversity creates inclusive communications that drive innovation". Moreover inclusion also harnesses great ideas that drive innovation" (Engelmeier, 2012, p. ix). Again the importance of the relationship between inclusion and diversity is emphasised, as is the notion that inclusion drives innovative behaviour. The result of the study on shop floor workers therefore tie up with these propositions as well as the theories gathered in Chapter 2.

Another finding during data collection was the practice of daily small team meetings every morning. Daily small team prep meetings were held in order for employees to be given the opportunity to raise issues. This is a form of including workers in the trouble shooting process. It was reported by supervisors that many operational challenges and problems got solved by worker's innovative ideas in these contact sessions. This ties in with the De Jong and Den Hartog (2007) proposition that a shared leadership style motivates the generation of new ideas, which in turn is found to enhance innovation.



These meetings were also held within a safe environment where workers knew they won't be ridiculed for speaking up and raising their concerns. These practices therefore embody the constructs of trust, comfort and inclusion.

A roadmap to help achieve an inclusive culture that embraces diversity with the aim of achieving high organisational performance is explained in Guillory and Guillory (2004). Two of the steps include educating staff about diversity benefits, and implementing measurable leadership and management objectives accountable to top leadership (Guillory & Guillory, 2004). It is important to make these strategies practical and actionable in order to implement them and to monitor their progress.

Unfortunately the extent to which trust, development or inclusion perceived by workers were correlated to the supervisor's perspective of the worker's willingness, resulted in insignificant results. Therefore the respective correlation tests failed to reject or approve these hypotheses. Hence surpassing the common method bias by using this technique could not be utilised.

Some interesting results however were obtained with regards to the relationship amongst the LMX constructs (i.e. trust, development and inclusion). Even though these relationships aren't core to this research, they do however probe interest. Therefore recommendations for future research regarding these relationships will be outlined in the next chapter.

6.2 A Comment on Construct Variables

More significant results indicate that worker education and development appear to be strongly correlated (i.e. supervisor perspective = 0.38). A plausible explanation for this may be because those individuals who have experienced training and learning in the past, recognise its value. They therefore identify and embrace formal development as it occurs, whereas others hardly recognize or appreciate that someone is trying to share knowledge with them at times.



Race and trust in both perspectives resulted in a correlation of $= -0.335$. As black was coded 0 and white coded 1, it means that white workers perceived less trust from their supervisors as did their supervisors towards them. Since only six percent of the respondents were white this result cannot be seen as reliable and no inferences can be made as to why.

6.3 Comment on t-Tests

By comparing a construct from the supervisor's perspective to the worker's perspective, insight may be obtained with regard to the alignment these parties share with regards to their LMX relationship. Two interesting results that yielded significance were obtained. It was found that levels of inclusion of the worker were higher from the supervisors' perspective (i.e. mean = 4.3) than those from the workers' perspective (i.e. mean = 3.8).

This result was found to be highly significant beyond the 1% confidence interval. This means that on average workers almost agreed on the issue of whether they felt included, and supervisors strongly agreed that these workers were being included in team and organisational contexts. It can therefore be concluded that there is a discrepancy between the extent to which supervisors believe their workers are being included in the team and organisation, and the levels of inclusion truly felt by workers.

One reason could be that supervisors only view demographical differences in their perspective of diversity of workers, whilst diversity in reality includes other personality and generational changes as well. This is since diversity refers to any dimension that differentiates people from each other (Toops, 2009). Another vindication for this difference is explained by the following. Miller (1998) suggests that subtleties could discourage workers from suggesting ideas.

Therefore supervisors might be oblivious to the small nuances in their exchange with their workers that in fact make workers feel less included. Supervisors may also rate themselves higher in making their workers feel included due to self-bias, i.e. rating their own efforts higher than others would.



Why supervisors at times fail to make workers feel included can be explained by the following. Establishing an inclusive environment also requires investing in resources and time (Katz, 2002). Strategic planning to transform an organisation's culture might be perceived by line managers and supervisors, as something that gets in the way of day to day business and KPA's. Therefore such long term prerogatives might be neglected. Another reason may very well just be because of incompatible personalities.

The second result was only found to be marginally significant, but well worth commenting on. The willingness of workers to introduce new ideas (i.e. be innovative) was found to be perceived higher (mean = 3.8) from the worker than from the supervisor (mean = 4). Workers might think that they are contributing regularly with valuable ideas, whilst supervisors experience it slightly less. The means are, however, very close so for all practical purposes it can be inferred that there is relative alignment between these variables.

Yammarino and Atwater (1997) suggest some reasons for differences in self, and other-ratings; "Self-ratings are often inflated due an individual's ignorance of how he or she is seen by others, aided by raters' tendencies to withhold negative feedback during daily business" (Yammarino & Atwater, 1997, p. 40). In cases where feedback was given, the recipients often discount or rationalize negative feedback, and accept positive feedback, (Yammarino & Atwater, 1997).

The phenomenon where people tend to rate themselves higher on a value-adding or ability based attribute than how others, e.g. supervisors rate them is also just a bias common to human nature. One tends to be subjective towards one's perceptions of self for reasons of e.g. pride or self interest. Someone's inflated self image could also contribute to their rating themselves higher.

6.4 Comment on Factor Analysis and Regression

The following section will aim to discuss the effect that the dynamics between the predictive variables (trust, development and inclusion) as well as the effect that the



combined presence of these constructs has on a worker's willingness to introduce new ideas.

First the results from the factor analysis will be discussed. This test endeavours to group constructs together that all load strongly. If this is achieved the constructs are aligned and some pattern or relationship exists amongst them. Two factors stood out from this test. It was found that trust, inclusion and willingness from the supervisor's perspective loaded strongly together. No real cross loading was found. Therefore it appears that these variables share common trends with each other. This result aligns well with the correlation tests done between trust, inclusion and willingness.

The second factor loaded trust, development, inclusion and willingness from the worker's perspective together. These constructs appear to share characteristics with each other. Only the inclusion/willingness and trust/willingness correlation results tie in with this result. The interesting thing however is how the supervisor constructs load together and how the worker constructs load together. It can therefore be suggested that the two groups aren't completely aligned with regard to how they view their relationships, i.e., there appears to exist some degree of disconnect between the groups. This has to some degree already been attempted to be explained earlier on.

In order to analyse the entire dynamic that these three aforementioned constructs put together have on the willingness construct, the multiple linear regression from the previous chapter was performed. This test intends to determine how much variance in the dependent variable (willingness of worker to introduce new ideas) is explained by the explanatory variables put into the equation. Three models were constructed to test whether any variance can be explained. The first model included the control variables; age, tenure and levels of education.

Thereafter the worker perceived constructs were added, and lastly the supervisor perceived constructs. The willingness construct from the supervisor's perspective was chosen as dependent variable. Model three yielded the results put out in the previous chapter.



As stated, only 20% of the variance in the willingness variable was explained by model three which includes all the other constructs. Even though this seems little it still has an impact and is worth mentioning on. The highly significant and positive coefficient result regarding supervisor perceived trust is in alignment with the literature review, i.e. the more the supervisor perceives trust, the more s(he) perceives willingness.

Certain modes of behavioural interaction like being patient and helpful, listening, and looking out for someone's interests should problems arise, are typical of trusting relationships. These modes were found to be positively correlated with employees' generation of new ideas (De Jong & Den Hartog, 2007). Therefore the positive coefficient result ties in with the reviewed literature.

It might also be that as a supervisor trusts a worker, he/she might be more open to acknowledge and consider the value and frequency of that worker's suggestions. This may be as a result of believing in the worker's ability, integrity and benevolence (antecedents of trust). These attributes of trust should therefore make the ideas from the worker appear more valuable and open for consideration to the supervisor.

The only other marginally significant result was that the supervisor perceived development of the worker had a negative albeit small coefficient, i.e. oppositely related. It can be proposed that if a supervisor feels that a worker has been developed more, they might expect this individual to come up with innovative ideas more regularly. When they don't live up to this expectation their willingness is perceived as being relatively less so than equally willing workers who are less developed as a result of this expectation.

Another explanation can be derived from Zhou (2003). Low monitoring and high feedback is said to improve worker's propensity to introduce new ideas. Therefore in some cases high levels of monitoring and low levels of feedback might have adversely affected the impact of the development on the willingness of the worker to introduce new ideas.

In conclusion, trust was expected to enhance a worker's willingness because amongst other arguments, Rosenfeld and Euchner (2012) deem trust as necessary to make



organisational cultures innovative. Development was expected to enhance a worker's willingness. Zhou (2003) argues that this holds because the impact of a mentor and the learnings they share with their workers inspires the workers to introduce new ideas. However favourable conditions for learning are also required (Zhou, 2003). Inclusion was expected to enhance a worker's willingness because according to Sweeny (2009) the collective thinking of a diverse labour force results in better insight and greater intellect.

Workers experienced inclusion less than supervisors perceived them to experience inclusion. Supervisor constructs grouped together as having inter-relational trends, whilst worker constructs grouped together. This seems to accentuate the disconnect between the perceptions of the LMX relationships between the two groups. Both trust and inclusion were found to be positively correlated with a worker's willingness to introduce new ideas. These results confirm the inferences made in the literature review.

In the presence of all three constructs and the control variables that make up the demographics of the chosen sample, the willingness of a worker to introduce new ideas could also to some extent be predicted by trust and development. As expected, trust again impacted positively on willingness, but contradictory to literature development had an adverse effect in this study.



Chapter 7: Conclusion

7.1 Summary of the Study

This study was intended to determine to what extent certain attributes of Leader Member Exchange (LMX) relationships impact of the innovation of shop floor workers in South Africa. LMX describes interaction within relationships. These relationships originate and develop within a company's specific organisational culture. The measure chosen for innovation was their willingness to introduce new ideas since, innovation encompasses both the proposal and application of new ideas, Singh (2010). It was also established that being innovative relates to being creative.

Research relating to innovation is relevant since it is said to translate to numerous benefits to organisations. In today's rapidly changing and disruptive business environment, innovation is regarded as key driver and differentiator in organisations' competitiveness. Globalisation further requires from companies to reassess their strategies and to become innovative in the ways they bring their products and services to market. Organisations' innovative capacity depends largely on the innovative capabilities of its individual employees. New and creative ideas were found to be an appropriate measure of innovation at the shop-floor level.

Moreover, literature revealed that innovation can occur at different levels throughout the organisation, which grants relevance to this study. The need for a better understanding of what drives innovation at shop floor level has been established. The relevance of the value shop-floor innovation brings due to its' organisational location is justified, since these employees work at the coal face of operations.

One source of a companies' innovation lies within its employees. The interaction that leaders have with their members is said to contribute to members' positive deviance. The quality of the LMX relationship a leader develops with his/her member has many outcomes. Efficiency, performance and commitment are examples of such outcomes. Of particular interest is the impact of LMX on innovation. High quality LMX relationships have

been found to impact positively on innovative behaviour of employees (Janssen & Van Yperen, 2004).

Because of the South African shop floor worker context certain LMX constructs which align to worker needs were chosen. These constructs trust, development and inclusion are attributes of the LMX relationship that exist between workers and their supervisors. These constructs were unpacked and their relationship, particularly to the introduction of new ideas, was explored.

The uniqueness of the South African shop-floor worker environment led to the identification of trust, development and inclusion as primary LMX constructs which addresses their needs. Some reasons include the following. Trust is identified as essential since many workers feel fearful towards authority. Inclusion is a means of embracing and leveraging off the various benefits derivable from diversity. Development addresses knowledge inadequacies required to do critical thinking and evaluation in order to come up with novel ideas.

As already indicated, it was found that both trust and inclusion positively correlated with a worker's willingness to introduce new ideas. These results confirm the inferences made in the literature review. The main hypothesis relating to development was failed to be accepted or rejected. These results pave the way for certain managerial and academic implications well worth considering.

7.2 Implications for Management

Leaders in organisations are often far removed from shop-floor workers and do not always appreciate their concerns. Cognisance of the needs, interests and concerns of these workers need to be taken by those in authority on a continuous basis. In order to avoid workers' revolt and its dire consequences, like the disastrous Marikana event, leaders in organisations should be sensitive to the concerns of workers. Moreover decisions regarding the organisation must be made bearing these worker issues in mind.



More specific to this study was the impact of LMX on shop-floor innovation. The benefits derived from having trusting LMX relationships have been outlined in this report. This research has shown that trusting relationships are aligned with worker's propensities to introduce new and often creative ideas for e.g. improvements to processes. Furthermore it was also proven that having LMX relationships where shop-floor workers feel inclusion towards the organisation, relates to workers being more willing to suggest new ideas and hence contribute to overall innovation. Embracing diversity through inclusion thus promotes innovation at shop floor level.

These innovations may lead to cost savings and job efficiencies that directly affect the bottom line. They may also improve quality levels, which will improve the organisation's overall competitiveness. Also, enabling shop-floor workers to give voice to their new ideas, and have supervisors listen to them and consider their value- adding contributions, should result in workers' overall job satisfaction and sense of self worth. This may in turn increase their overall commitment to the organisation. Critical but uplifting feedback from supervisor's will in turn help refine workers' thought processes whilst encouraging them to keep coming up with new ideas. It will also stand managers and supervisors in good stead if they encourage workers' innovative efforts and give them recognition.

Also in today's era of digital communications and social networking, it becomes even more important to make the effort to have physical interactions with one's staff. It is often much easier to send an email than to go to the member and engage with him/her. But by going the extra mile and interacting face to face, relationships get built, responses can be more accurately gauged, concerns and needs are better identified. Moreover physical interaction also lends itself to better interpretations of expectations from both sides of the dyad.

Top management should therefore encourage shop-floor supervisors to engage with their workers in a way that builds trust in each of these relationships, and also to make each unique individual feel included as part of the team. Supervisors should prioritise on building trust in all their LMX relationships with workers. They should also be open minded enough to acknowledge different types of people, include them in work activities and team discussions, and leverage off the benefits from their diverse perspectives. Leaders of

organisations should therefore also be cognisant of and reliant on the relational skills required from supervisors when appointing them and evaluating their performance.

7.3 Limitations

The following limitations were present in this study:

- Due to time and other constraints only a finite amount of individuals (12 supervisors and 50 shop floor workers) were used for datasets.
- LMX constructs and innovation were investigated only in the manufacturing industry
- Only two firms' employees were used as respondents to the questions on the constructs.
- The research was conducted in English, which is likely to be a second language for most respondents. Concepts such as innovative ideas may have not been completely comprehended.
- Questioning workers about workers' relationships with their bosses may have caused them to give answers towards favouring their bosses in fear of information leaking to their bosses.

7.4 Recommendations for future Research

During the review of the literature on these constructs and during the analysis of the results some ideas for further research came about. The amount of fear a worker has for his supervisor may also impair his/her willingness to introduce new ideas. Therefore fear should be investigated. Another measure of innovation, risk taking, can be reviewed and used as a dependent variable. The amount of patents released in technology companies can also be used as a measure of innovation. Empathy, a construct identified as a need for workers in South Africa was briefly reviewed from literature. This construct can also be tested to determine its impact on innovation.

Instead of shop floor workers, other dyadic LMX relationships (e.g. at middle manager) levels could be studied in a similar fashion. Other industries such as retail and services could also be used as population. Trust and inclusion were found to be highly correlated

both from supervisor and shop floor worker perspectives. Development and inclusion was also found to be moderately correlated. The intricacies on how these constructs relate to each other could provide the basis for further research.

To build on what was started in this study, ways to improve trust, development and perceived inclusion and how to align the perspectives between the different groups with the aim of generating innovation capabilities could also be researched. Another suggestion is that in order to improve on the current study, larger samples and a multitude of different companies, each bringing its own culture, to the fore can be use. Lastly some interesting correlations were found between some of the LMX constructs.

7.5 Conclusion

The recent events at the Lonmin mine at Marikana have demonstrated that insensitivity to workers' concerns may have disastrous consequences for the South African economy. This study has highlighted certain constructs that may be of value in order to enhance continuous dialogue between supervisors and shop-floor workers. Although limited to shop-floor workers in the manufacturing industry, these constructs may apply equally to other industries.

It is clear that more work can be done with regard to ways in which LMX impacts on innovation. This research has indicated that it would stand managers and supervisors in good stead to be cognisant of the perceptions of relationships they have with shop-floor workers as a means to inspire and motivate them to become more innovative. This research has shed some light and provided insight into some of the drivers of innovation at shop-floor level in manufacturing firms in South Africa.

Reference List

- Anderson, N. R., de Dreu, C. K. W., & Nijstad, B. A. (2004). The routinization of innovation research: a constructively critical review of the state-of-the-science. *Journal of Organizational Behavior*, 25(2), 147-174.
- Arnolds, C. A., Boshoff, C., Mazibuko, N. E., & Klemz, B. R. (2010). The motivational impact of job security, recognition, monetary incentives and training on the job performance of blue collar manufacturing employees. *South African Journal of Labour Relations*, 34(1), 86-102.
- Babyak, R. (2006). Innovation May Fall into Skills Gap. *Appliance design*, 54(8), p. 5
- Barlett, C. A., Hall, B. J., & Bennett, N. (2008). GE's Imagination Breakthroughs: The Evo Project. *Harvard Business School Cases*, 1-24. Harvard Business Publishing.
- Bekker, C. J. 2006. Finding the 'other' in African Christian Leadership: Ubuntu, kenosis and mutuality. *Paper presented at the International Conference on Value-based Leadership*, University of Stellenbosch Business School.
- Bezuijen, X. M., van Dam, K., van den Berg, P. T., & Henk, T. (2010). How leaders stimulate employee learning: A leader-member exchange approach. *Journal of Occupational & Organizational Psychology*, 83(3), 673-693. DOI: 10.1348/096317909X468099
- Bidault, F., & Castello, A. (2009). Trust and creativity: understanding the role of trust in creativity-oriented joint developments. *R&D Management*, 39(3), 259-270. DOI: 10.1111/j.1467-9310.2009.00557.x
- Boe, T. A. (2002). *Gaining and/or maintaining employee trust within service organizations. Research Paper* (Masters of Science Degree in Training and Development, The Graduate School University of Wisconsin-Stout, Wisconsin, USA) Retrieved from <http://www2.uwstout.edu/content/lib/thesis/2002/2002boet.pdf>

- Cakar, N. D., & Ertürk, A. (2010). Comparing Innovation Capability of Small and Medium Sized Enterprises: Examining the Effects of Organizational Culture and Empowerment. *Journal of Small Business Management*, 48(3), 325–359.
- Capitalise on shop floor skills. (2001). *Metalworking Production*, 145(11), 60.
- Chetty, R. (2012). Success through innovation: How BMW have been able to double production capacity. *Management Today*, 30(3), 22-25.
- Chappel, I., & Barnett, E. (2012). What's behind South Africa's mine violence? Retrieved from <http://www.cnn.com/2012/08/17/world/africa/marikana-south-africa-mine-shootings/index.html>
- Chowdhury, S. (2005). The Role of Affect- and Cognition-based Trust in Complex Knowledge Sharing. *Journal of Managerial Issues*, 17(3). 310-326.
- Clegg, C., Unsworth, K., Epitropaki, O., & Parker, G. (2002). Implicating trust in the innovation process, *Journal of Occupational & Organizational Psychology*, 75(4), 409-422.
- Cobb, A. (2012). Going Boss Free: Utopia or 'Lord of the Flies?' *Knowledge@Wharton*, Retrieved from <http://knowledge.wharton.upenn.edu/article.cfm?articleid=3059>
- Connell, J., Ferres, N., & Travaglione, T. (2003). Trust in the Workplace. The Importance of Interpersonal and Organizational Support. *Journal of Management Research*, 3(3), 113-118.
- 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.

- De Jong, J. P. J., & Den Hartog, D. N. (2007). How leaders influence employees' innovative behaviour. *European Journal of Innovation Management*, 10(1), 41-64.
- De Groot, H. L. F., Poot, J., & Smit, (2007). Agglomeration, Innovation and Regional Development. *Tinbergen Institute Discussion Paper*, Tinbergen Institute, 1-35.
- Dervitsiotis, K., N. (2006). Building trust for excellence in performance and adaptation to change. *Total Quality Management & Business Excellence*, 17(7), 795-810, DOI: 10.1080/14783360600595153
- Dougherty, D., & Heller, T. (1994). The illegitimacy of successful product innovation in established firms. *Organization Science*, 5(1), 200–218.
- Dutton, J. E., Worline, M. C., Frost, P. J., & Lilius, J. (2006). Explaining Compassion Organizing. *Administrative Science Quarterly*, 51(1), 59-96.
- Egan, M. E., (2012). Fostering Innovation Through a Diverse Workforce. *Forbes Insights*. 1-19
- Engelmeier, S. (2012). *Inclusion...The New Competitive Business Advantage*. Mineapolis, Minnesota, U.S.A. InclusionInc Media.
- Euchner, J., & Henderson, A. (2011). The practice of innovation: innovation as the management of constraints. *Research Technology Management*, 54(2), 47-54, DOI: 10.5437/08953608X5402009
- Fard, H. D., Rostamy, A. A. A., & Taghiloo, H. (2009). How Types of Organisational Cultures Contribute in Shaping Learning Organisations. *Singapore Management Review* 31(1). 49-61.
- Ferrari, B. T., & Goethals, J. (2010). The Art of Innovation. *McKinsey Quarterly*, Issue 3, 98-104.

- Friedrich, T. L., Mumford, M. D., Vessey, B., Beeler, C. K., & Eubanks, D. L. (2010). Leading for Innovation: Reevaluating Leader Influences on Innovation with Regard to Innovation Type and Complexity. *International Studies of Management & Organization*, 40(2), 6-29. DOI: 10.2753/IMO0020-8825400201
- Gao, X. (2011). Effective Strategies to catch up in the era of globalization: Experiences of local Chinese telecom equipment firms. *Research Technology Management*, 54(1), 42-49.
- Giovannoni, C. (2009). Management by Empathy. *Design Week*, 24(21), 22.
- Goswami, S., & Mathew, M. (2005). Definition of innovation revisited: an empirical study on indian information technology industry. *International Journal of Innovation Management*, 9(3), 371-383.
- Graen, G., & Scandura, T. (1987). Towards a psychology of dyadic organizing. *Research in Organizational Behavior*, 9(1), 175-208.
- 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. *Leadership Quarterly*, 6(1), 219-247.
- Grant, R. M. (1996). Prospering in Dynamically-competitive Environments: Organizational Capability as Knowledge Integration. *Organization Science*, 7(4), 375-387.
- Graves, L. M., & Luciano, M. M. (2010). Effects of lmx on employee attitudes: the role of need satisfaction and autonomous motivation. *Academy of Management Annual Meeting Proceedings*, 1- 6. DOI: 10.5465/AMBPP.2010.54493902
- Gratton L., & Erickson, T. J. (2007). 8 Ways to Build Collaborative Teams. *Harvard Business Review*, 85(11), 100-109.

- Guillory, W., & Guillory, D. (2004). The Roadmap to Diversity, Inclusion, and High Performance. *Healthcare Executive* 19(4). 24-30.
- Guth, M. (2005). Innovation, Social Inclusion and Coherent Regional Development: A New Diamond for a Socially Inclusive Innovation Policy in Regions. *European Planning Studies*, 13(2). DOI: 10.1080/0965431042000321866
- Handy, C. (1993). *Understanding Organisations: How Understanding the Way Organisations Actually Work Can Be Used to Manage Them Better*. New York, USA: Oxford University Press
- Harrison, R. (2005). *Learning and Development*. London, UK: Chartered Institute of Personnel and Development.
- Hobson, C. J., Kesic, D., Rosetti, D., Delunas, L., & Hobson, N. G. 2004. Motivating Employee Commitment with Empathy and Support during Stressful Life Events. *International Journal of Management*, 21(3), 332-337.
- Hofstede, G. (2011). Retrieved from <http://geert-hofstede.com/organisational-culture.html>
- Ibrahim, S., & Fallah, M. H. (2005). Drivers of Innovation and Influence of Technological Clusters. *Engineering Management Journal*, 17(3), 33-42.
- Jabobs, S. (2012). The blossoming of African innovation. *African Business*, 388(1), 18-22.
- Janssen, O. (2005). The joint impact of perceived influence and supervisor supportiveness on employee innovative behaviour. *Journal of Occupational and Organizational Psychology*, 78(1), 573-579.
- Janssen, O., & van Yperen, N.W. (2004). Employees' goal orientations, the quality of leader-member exchange, and the role of job performance and job satisfaction. *Academy of Management Journal*, 47(3), 368-384.

- Jaramillo, F., Mulki, J. P., & Boles, J. S. (2011). Workplace stressors, job attitude, and job behaviors: is interpersonal conflict the missing link? *Journal of Personal Selling & Sales Management*, 31(3), 339-356.
- Katz, J. H., & Miller, F. A. (2002). The Inclusion Strategy. *Executive Excellence*, 19(8), 12.
- Kenny, B., Reedy, E. (2006). The Impact of Organisational Culture Factors on Innovation Levels in SMEs: An Empirical Investigation. *Irish Journal of Management*, 27(2), 119-142.
- Kilcarr, S. (2005). Matching Game. *Fleet Owner* 100(5). 75.
- Kim, C., & Park, J. (2010). The Global Research-Development Network and its Effect on Innovation. *Journal of International Marketing*, 18(4), 43-57. DOI: 10.1509/jimk.18.4.43
- Kohtamäki, M, Kekäle, T., & Viitala, R. (2004). Trust and Innovation: from Spin-Off Idea to Stock Exchange. *Creativity & Innovation Management*, 13(2). 75-88. DOI: 10.1111/j.0963-1690.2004.00296.x
- Levin, D. Z., & Cross, R. 2004. The Strength of Weak Ties You Can Trust: The Mediating Role of Trust in Effective Knowledge Transfer. *Management Science*, 50(11), 1477-1490.
- Lin, H., & McDonough III, E. F. (2011). Investigating the Role of Leadership and Organizational Culture in Fostering Innovation Ambidexterity. *IEEE Transactions on Engineering Management*, 58(3), 497-509.
- Madjar, N., & Ortiz-Walters, R. (2009). Trust in Supervisors and Trust in Customers: Their Independent, Relative, and Joint Effects on Employee Performance and Creativity. *Human Performance*, 22(2), 128-142, DOI: 10.1080/08959280902743501

- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, 20(3), 709-34.
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (2007). An integrative model of organizational trust. *Academy of Management Review*, 32(2), 344-354.
- McAllister, G. (1995). Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38(1), 24-59.
- Mika, S. (2007). The Four Drivers of Innovation. *Gallup Management Journal Online*. p. 1 – 7
- Miller, F. A. (1998). Strategic culture change: The door to achieving high performance and inclusion. *Public Personnel Management*, 27(2). 151-160.
- Minor, L. B. (2011). From Desegregation to Diversity and Inclusion. *Vital Speeches of the Day*, 77(1). 33-35.
- Nkosi, M. (2012). South Africa shootings: Marikana mine inquiry begins. Retrieved from <http://www.bbc.co.uk/news/world-africa-19781993>
- Otani, N. (2010). Innovation and the environment. *OECD Observer*. 279(1), 55.
- Patel, N. (2011). Diversity and Inclusion Fuels Innovation in STEM. Retrieved from <http://www.todayseengineer.org/2011/May/diversity.asp>
- Pavlovich, K., & Krahnke, K. (2012). Empathy, connectedness and organization. *Journal of Business Ethics*, 105(1), 131-137. DOI: 10.1007/s10551-011-0961-3
- Peyper, L. (2012). There won't be any big bang break from the ANC'. Retrieved from <http://finweek.com/2012/09/04/there-wont-be-any-big-bang-break-from-the-anc/>

- Plaut, M. (2012). South Africa's Lonmin Marikana mine clashes killed. Retrieved from http://www.bbc.co.uk/news/world-africa-19292909#story_continues_2
- Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common Method Biases in Behavioural Research: A Critical Review of the Literature and Recommended Remedies. *Journal of Applied Psychology*, 88(5), 879-903.
- Rao, B. C. (2010). How to Measure Innovation. *Challenge* 53(1), 109-125.
- Robinson, J. A., & Acemoglu, D. (2011). *Why Nations Fail: The Origins of Power, Prosperity and Poverty*. London, United Kingdom: Crown Publishing Group.
- Rosenfeld, R., & Euchner, J. (2012). Culture, People, and Innovation. *Research-Technology Management*, 55(2), 13-17. DOI: 10.5437/08956308X5502007
- Sarkar, S. (2011). A study on employee engagement at manufacturing industries. *Global Management Review*, 5(3), 62-72.
- Saunders, M., & Lewis, P. (2012). *Doing research in business & management* (1st Ed.). Harlow, Essex, England: Pearson.
- Scarbrough, H., & Corbet, J. M. (1992) *Technology and Organization: Power, Meaning and Design*. London: England Cengage Learning EMEA.
- Schein, E. (2004). *Organizational culture and leadership*. Retrieved from http://books.google.co.za/books/about/Organizational_Culture_and_Leadership.html?id=xhmezdokfnYC&redir_esc=y
- Schoeff Jr., M. (2006). Amid calls to bolster U.S. innovation, experts lament paucity of basic math skills. *Workforce Management*, 85(5), 46-49.

- Seopa, N. (2010). *The impact of inclusion in the talent pool on the psychological contract of high potential employees* (MBA thesis, Gordon Institute of Business Science (University of Pretoria), South Africa). Retrieved from <http://upetd.up.ac.za/ETD-db/ETD-search/search>
- Singh, S. K. (2011). Organizational Innovation as Competitive Advantage during Global Recession. *Indian Journal of Industrial Relations*, 46(4), 713-725.
- Sparrowe, R.T., & Liden, R.C. (1997). Process and structure in leader-member exchange. *Academy of Management Review*, 22(1), 522-552.
- Stefano, S. F., & Wasylyshyn, K. M. (2005). Integrity, Courage, Empathy (ICE): Three Leadership Essentials. *Human Resource Planning*, 28(4), 5-7.
- Sunter, C. (2012). Is South Africa about to experience its own Arab Spring? Retrieved from <http://www.leader.co.za/article.aspx?s=23&f=1&a=4011>
- Sweeny, P. (2009). Attributes of Diversity & Inclusion. *Financial Executive*, 25(9), 18-21.
- Thanasegaran, G. (2009). Reliability and Validity Issues in Research. *Integration and Dissemination*, 9(1), 35-40.
- Toops, L. M. (2009). Work Force Diversity Plus Inclusion Equals True Organizational Innovation. *National Underwriter*, 113(45), 26-27.
- Vila, A. M. (2012). Building a Culture of Inclusion at the U.S. Air Force Academy. *National Civic Review*, 101(1), 49-53.
- Wyld, D. C., & Maurin, R. (2009). Keys to Innovation: The Right Measures and the Right Culture? *Academy of Management Perspectives*, 23(2), 96-98 DOI: 10.5465/AMP.2009.39985544.

- Yammarino, F. J., & Atwater, L. E. (1997). Do Managers See Themselves as Others See Them? Implications of Self-Other Rating Agreement for Human Resources Management. *Organizational Dynamics*, 25(4), 35-44.
- Yang, B., & Wang, X. (2009). Successes and challenges of developing human capital in the People's Republic of China. *Human Resource Development International*, 12(1), 3-14.
- Yukl, G. (2002). *Leadership in Organizations*. 5th ed., Prentice-Hall, Englewood Cliffs, NJ.
- Yu, Liang, J. (2004). A new model for examining the leader-member exchange (LMX) theory. . *Human Resource Development International*, 7(2), 251-264, DOI: 10.1080/1367886042000243826
- Zahra, S.A., Nielsen, A.P. and Bognar, W.C. (1999). 'Corporate Entrepreneurship, Knowledge and Competence Development'. *Entrepreneurship: Theory and Practice* 23(3), 169–189.
- Zhou, J., & Shelley, C.E. (2003), "Research on employee creativity: a critical review and proposal for future research directions", in Martocchio, J.J. and Ferris, G.R. (Eds), *Research in Personnel and Human Resource Management*, Elsevier, Oxford.
- Zhou, J. (2003). When the Presence of Creative Coworkers Is Related to Creativity: Role of Supervisor Close Monitoring, Developmental Feedback, and Creative Personality. *Journal of Applied Psychology*, 88(3), 413-422, DOI: 10.1037/0021-9010.88.3.413