

# Resistance to change at a South African mining surface operation

**R Jacobs**



**orcid.org 0000-0002-3522-9062**

Mini-dissertation submitted in partial fulfilment of the requirements for the degree *Master of Business Administration* at the North-West University

Supervisor: Dr JLP Naudé

Co-supervisor: Prof CJ Botha

Graduation May 2018

Student number: 26917696

## ACKNOWLEDGEMENTS

This mini-dissertation would not have been possible if not for the following persons and institutions; therefore I would like to express my very great appreciation accordingly:

- To Christ, for blessing me with the ability, privilege, sense and perseverance to complete my MBA;
- To my husband, Jean-Pierre, for his undying support, love and patience in order for me to follow my dreams;
- To my two wonderful and understanding children, Jazmijn and Logan, for their patience, love and support;
- To my two sets of parents; Mariaan and Andre Gagiano, and Roy Kotzé and Alida Pieterse for words of wisdom and encouragement, support, understanding and unconditional love;
- To my sisters, Stephné and Mariska, and their significant others, for inspiration and motivation;
- To my grandmother, Nan du Plooy, for her faith, prayers, support and love;
- To the rest of my support system, thank you;
- My supervisor, Doctor Wikus Naudé, for his expert advice, valuable and constructive recommendations during the planning, development and execution of this mini-dissertation. His eager and willing approach and efforts to this research work have been very much appreciated.
- To the co-supervisor, Professor CJ Botha, for his assistance in this mini-dissertation;
- The academics and administration staff of the North-West University School of Business and Governance, for their guidance, assistance and efforts;
- My fellow MBACers; Ryno Serfontein, Mynie Stoffberg, José Pinto, Derick Turner and Joanna Oberholzer, for your hard work and perseverance;
- To the rest of the last Phase 3 MBA students, for the words of encouragement when the times were tough;

- Christine Bronkhorst, Information librarian (Law and MBA) at the North-West University, for the research assistance provided by her;
- Professor Suria Ellis of the North-West University Statistical Consultation Services, for her analyses, advice and statistical guidance;
- Antoinette Bisschoff, for her assistance in editing the final copy of this research document;
- Morero Rapeane, Human Resources representative, for his assistance in translating the questionnaire as well as administering the process whereby the respondents filled out the questionnaire; and last, but not least,
- South Uranium Plant's management team, for the support and assistance, as well as the respondents of the questionnaire in support of the empirical study.

## ABSTRACT

Change is the only constant in life, hence why it necessitates organisations to reinvent themselves, via transformations, in order for them to survive technological advances within the industry and to hold out through tough, volatile economic periods, also brought about by change. Change within an organisation is a daunting task, and according to literature, approximately 70 percent of meaningful changes executed by organisations, fail. One of the main reasons for this occurrence is the resistance exerted by their employees. In view of this, the present study aimed to bare whether employees based at a South African mining surface operation exert traces of resistance to change.

According to literature it was found that the reasons for employees to resist change could include fear of the unknown and inadequate understanding of the need for the change. People also resist change when the change endangers their jobs, their routines as well as their power or status in an organisation. When the benefits and rewards for implementing these changes do not outweigh the effort involved, change is also not accepted. Resistance, however, can be successfully managed if the factors that give birth to the resistance can be identified and managed accordingly.

In this study, factors such as personal competency, job satisfaction, affective commitment, personal perception of change and change readiness were included and evaluated as specific elements of resistance and readiness in employees. The results showed that employees at a South African mining surface operation is likely to resist change when it was perceived as uncertain, if it raised negative feelings, if it threatened their job security and when they perceived that the potential losses outweighed the gains. The respondents also indicated that they did not perceive to have any real influence nor input in the organisation's decision-making processes. Further results showed that a statistically weak positive correlation, at a 99% confidence level, could be drawn between personal competency and work-related basic needs satisfaction. This finding was also confirmed by literature which was included in the literature review. Yet, the results from this investigation did not indicate significant relationships between change readiness and resistance to change. This, however, is in contrast to what some literature showed. The study includes conclusions from the literature review and the empirical study. Recommendations, as well as possible future research were indicated.

Key terms: resistance to change, organisational change, change, resistance, change management, change readiness, ready to change.

## TABLE OF CONTENTS

<b>ACKNOWLEDGEMENTS .....</b>	<b>I</b>
<b>ABSTRACT .....</b>	<b>III</b>
<b>CHAPTER 1: NATURE AND SCOPE OF THE STUDY .....</b>	<b>1</b>
<b>1.1 INTRODUCTION .....</b>	<b>1</b>
<b>1.2 PROBLEM STATEMENT .....</b>	<b>1</b>
<b>1.3 OBJECTIVES OF THE STUDY .....</b>	<b>2</b>
1.3.1 Primary objective .....	2
1.3.2 Secondary objectives.....	3
<b>1.4 SCOPE OF THE STUDY .....</b>	<b>3</b>
1.4.1 Field of study .....	3
1.4.2 Institution under investigation .....	4
1.4.3 Geographical demarcation.....	6
<b>1.5 RESEARCH METHODOLOGY .....</b>	<b>6</b>
1.5.1 Literature review .....	6
1.5.2 Empirical study .....	7
<b>1.6 LIMITATIONS OF THE STUDY .....</b>	<b>8</b>
<b>1.7 LAYOUT OF THE STUDY .....</b>	<b>8</b>
1.7.1 Research design.....	8
1.7.2 Layout of the study .....	9
<b>1.8 SUMMARY .....</b>	<b>10</b>

<b>CHAPTER 2: LITERATURE REVIEW</b> .....	<b>11</b>
<b>2.1 INTRODUCTION</b> .....	<b>11</b>
<b>2.2 WHAT IS CHANGE?</b> .....	<b>12</b>
<b>2.3 ORGANISATIONAL CHANGE</b> .....	<b>12</b>
<b>2.4 CHANGE MANAGEMENT</b> .....	<b>13</b>
<b>2.5 RESISTANCE TO CHANGE</b> .....	<b>18</b>
2.5.1 Lewin's force field analysis .....	18
2.5.2 Factors which impact on employees' resistance to change.....	20
2.5.2.1 Stakeholder groups and their perceived power levels .....	21
2.5.2.2 Affective commitment .....	21
2.5.2.3 Job satisfaction.....	22
2.5.2.3.1 Turnover intent .....	22
2.5.2.4 Cognitive dissonance.....	22
2.5.2.4.1 Appropriateness of the change .....	23
2.5.2.4.2 Employees' personal perceptions about change.....	23
2.5.2.4.3 Ambivalent attitudes .....	24
2.5.2.5 Employee participation .....	24
2.5.2.5.1 Communication.....	24
2.5.2.6 Dispositional resistance .....	25
2.5.2.7 Change readiness .....	26
<b>2.6 SUMMARY</b> .....	<b>27</b>

<b>CHAPTER 3: EMPIRICAL STUDY .....</b>	<b>29</b>
<b>3.1 INTRODUCTION .....</b>	<b>29</b>
<b>3.2 GATHERING OF DATA .....</b>	<b>30</b>
<b>3.3 TARGET AND STUDY POPULATION .....</b>	<b>30</b>
<b>3.4 QUESTIONNAIRE USED IN THE STUDY .....</b>	<b>31</b>
3.4.1 Section A: Demographic information.....	33
3.4.2 Section B: Union affiliation.....	33
3.4.3 Section C: Personal competency levels.....	34
3.4.4 Section D: Job satisfaction, Intention to quit, Work-related basic need satisfaction & Affective commitment .....	34
3.4.4.1 Affective commitment .....	34
3.4.4.2 Work-related basic need satisfaction (W-BNS) .....	35
3.4.4.3 Job satisfaction & turnover intent.....	35
3.4.5 Section E: Perceived level of power, Employee participation, Resistance to change, Personal perception of change and “What would you change?” .....	36
3.4.5.1 Perceived level of power.....	36
3.4.5.2 Employee participation .....	37
3.4.5.3 Resistance to change .....	37
3.4.5.4 The employees’ personal perception of change.....	37
3.4.6 Section F: Perceived level of change readiness.....	38
<b>3.5 CONFIDENTIALITY .....</b>	<b>39</b>
<b>3.6 STATISTICAL ANALYSIS OF DATA.....</b>	<b>39</b>
<b>3.7 RESPONSES TO THE SURVEY.....</b>	<b>39</b>

<b>3.8</b>	<b>DEMOGRAPHIC INFORMATION OF THE RESPONDENTS.....</b>	<b>40</b>
3.8.1.1	Gender of respondents.....	40
3.8.1.2	Age of respondents .....	41
3.8.1.3	Respondents' ethnic groups .....	41
3.8.1.4	Respondents' highest qualifications obtained .....	42
3.8.1.5	Respondents' level of employment within the organisation .....	42
3.8.1.6	Respondents' period of employment.....	43
3.8.1.7	Respondents' union affiliation.....	44
<b>3.9</b>	<b>FREQUENCY DISTRIBUTION, MEAN AND STANDARD DEVIATION .....</b>	<b>45</b>
<b>3.10</b>	<b>RELIABILITY OF THE QUESTIONNAIRE .....</b>	<b>52</b>
<b>3.11</b>	<b>RESULTS OF THE ANALYSIS ON DEMOGRAPHIC INFORMATION AND CONSTRUCTS.....</b>	<b>55</b>
3.11.1	Independent <i>t</i> -tests.....	55
3.11.1.1	Independent <i>t</i> -tests: Differences between the factors in terms of gender .....	56
3.11.1.2	Independent <i>t</i> -tests: Differences between the factors in terms of race .....	57
3.11.1.3	Independent <i>t</i> -tests: Differences between the factors in terms of union membership.....	58
3.11.2	ANOVA tests .....	59
3.11.2.1	Independent ANOVA tests: Differences between the factors in terms of union affiliation.....	60
3.11.2.2	Independent ANOVA tests: Differences between the factors in terms of highest qualification obtained.....	62
3.11.2.3	Independent ANOVA tests: Differences between the factors in terms of work level .....	64

3.11.2.4	Independent ANOVA tests: Differences between the factors in terms of years employed .....	66
<b>3.12</b>	<b>RESULTS OF FURTHER ANALYSIS ON DEMOGRAPHIC INFORMATION AND INDIVIDUAL STATEMENTS OF TWO CONSTRUCTS.....</b>	<b>68</b>
3.12.1	Correlations .....	68
<b>3.13</b>	<b>SUMMARY .....</b>	<b>69</b>
<b>CHAPTER 4: CONCLUSIONS AND RECOMMENDATIONS .....</b>		<b>73</b>
<b>4.1</b>	<b>INTRODUCTION .....</b>	<b>73</b>
<b>4.2</b>	<b>CONCLUSIONS .....</b>	<b>74</b>
4.2.1	Demographic information.....	74
4.2.2	Reliability of the questionnaire used .....	75
4.2.3	Evaluation of the twelve factors which bring about resistance to change .....	75
4.2.3.1	Personal competency .....	75
4.2.3.1.1	Means and standard deviations .....	76
4.2.3.1.2	Personal competency correlations .....	76
4.2.3.2	Job satisfaction, turnover intent and work-related basic needs satisfaction.....	76
4.2.3.2.1	Means and standard deviations .....	77
4.2.3.2.2	Job satisfaction, intention to quit and work-related basic needs satisfaction correlations.....	77
4.2.3.2.3	Independent <i>t</i> -tests .....	77
4.2.3.2.4	ANOVA tests .....	78
4.2.3.3	Perceived level of power.....	79
4.2.3.3.1	Means and standard deviations .....	79

4.2.3.3.2	Perceived level of power correlations .....	79
4.2.3.4	Change readiness .....	79
4.2.3.4.1	Means and standard deviations .....	80
4.2.3.4.2	Change readiness correlations .....	80
4.2.3.4.3	Independent <i>t</i> -tests .....	80
4.2.3.4.4	ANOVA tests .....	81
4.2.3.5	Cognitive dissonance.....	81
4.2.3.5.1	Means and standard deviations .....	82
4.2.3.5.2	Perception of change correlations.....	82
<b>4.3</b>	<b>RECOMMENDATIONS .....</b>	<b>83</b>
<b>4.4</b>	<b>ACHIEVEMENT OF OBJECTIVES .....</b>	<b>85</b>
4.4.1	Primary objective .....	85
4.4.2	Secondary objectives.....	86
<b>4.5</b>	<b>SUGGESTIONS FOR FURTHER RESEARCH .....</b>	<b>87</b>
<b>4.6</b>	<b>SUMMARY .....</b>	<b>88</b>
	<b>REFERENCE LIST .....</b>	<b>90</b>
	<b>ANNEXURE A: .....</b>	<b>99</b>
	<b>RESISTANCE TO CHANGE QUESTIONNAIRE.....</b>	<b>99</b>
	<b>ANNEXURE B: .....</b>	<b>108</b>
	<b>LETTER FROM LANGUAGE EDITOR .....</b>	<b>108</b>

## LIST OF TABLES

Table 3-1:	Responses to the survey.....	39
Table 3-2:	Responses: Perceived personal competency levels.....	46
Table 3-3:	Responses: Job satisfaction.....	47
Table 3-4:	Responses: Turnover intent .....	47
Table 3-5:	Responses: Work-related basic needs satisfaction .....	48
Table 3-6:	Responses: Affective commitment .....	48
Table 3-7:	Responses: Perceived level of power.....	49
Table 3-8:	Responses: Employee involvement .....	49
Table 3-9:	Responses: Employee involvement .....	50
Table 3-10:	Responses: For or against change?.....	50
Table 3-11:	Responses: Personal perception about change .....	51
Table 3-12:	Responses: Change readiness – Willingness.....	51
Table 3-13:	Responses: Change readiness – Capability .....	52
Table 3-14:	Responses: Change readiness – Competency.....	52
Table 3-15:	Internal consistency as per Cronbach Alpha coefficients.....	53
Table 3-16:	Gender – Factor differences.....	56
Table 3-17:	Race – Factor differences .....	57
Table 3-18:	Union membership – Factor differences.....	58
Table 3-19:	Union affiliation – Factor differences .....	60
Table 3-20:	Highest qualification obtained – Factor differences .....	62
Table 3-21:	Paterson grade (Paterson grading, 2017) – Factor differences .....	64

Table 3-22:	Paterson grade (Paterson grading, 2017) – Factor differences .....	65
Table 3-23:	Years of service – Factor differences .....	66
Table 3-24:	Correlations.....	68

**LIST OF FIGURES**

Figure 1-1:	Ux U <sub>3</sub> O <sub>8</sub> Price® - Full history (Spot) .....	4
Figure 1-2:	Weekly U <sub>3</sub> O <sub>8</sub> spot price indicator .....	5
Figure 1-3:	Map of South Africa.....	6
Figure 1-4:	Graphical layout of the study .....	9
Figure 2-1:	Activities contributing to effective change management .....	14
Figure 2-2:	Lewin's force field analysis model .....	18
Figure 2-3:	Lewin's force field theory of change .....	19
Figure 3-1:	Gender.....	40
Figure 3-2:	Age (years) .....	41
Figure 3-3:	Ethnic group.....	41
Figure 3-4:	Highest qualification obtained .....	42
Figure 3-5:	Level of employment .....	42
Figure 3-6:	Period of employment in current position .....	43
Figure 3-7:	Union affiliation .....	44
Figure 3-8:	Union affiliation .....	44
Figure 3-9:	Union affiliation .....	45

## **CHAPTER 1: NATURE AND SCOPE OF THE STUDY**

### **1.1 INTRODUCTION**

Change is defined by the free dictionary (2017) as “an act or process through which something becomes different”. The Greek philosopher, Heraclitus, according to Reference.com (2017), used the word farther and said that “change is the only constant in life”. The ever-changing market demands force organisations to act accordingly by continually evolving, to counter and/or respond to the effects of market demands. For organisations to deal with the changes in the business environment and to profit from these changing opportunities, they need to evolve, in other words, change needs to take place. Organisational change, therefore, represents a shifting from the known to the unknown. Changes could include, but is not limited to, process changes, restructuring, changes in systems, management changes, changes in leadership and changes in the specific culture of the organisation.

To enable the company to transform successfully will require an assortment of interventions. These interventions usually involve and impact on people, specifically the stakeholders; both internally as well as externally. In order to administer these interventions successfully and to aid the change process, a competent, effective and efficient change management system needs to be at the order of the day.

According to Cummings and Worley (2015), employees generally do not support change within an organisation due to the fact that it will potentially influence their level of worth, their coping abilities and their competencies. Technical resistance, political resistance and cultural resistance are the three main sources from which most other factors of resistance to change originates from (Cummings and Worley, 2015).

### **1.2 PROBLEM STATEMENT**

Change is necessary in an organisation to survive technological advances within the industry; transforming and re-engineering an organisation is vital to maintain a competitive advantage over its competitors. Incorporating changes to an organisation which finds itself in crisis mode is a necessity if the organisation is to survive unstable economic periods. These organisations' processes, operations and/or systems are potentially deemed ineffective, which is why these processes need to be rectified sooner rather than later.

According to Russell (2017), approximately 70 percent of meaningful changes executed by organisations, fail.

One of the main reasons these organisations' change propositions fail is the resistance exerted by their employees. The reasons for the employees' resistance could include fear of the unknown, increased workload and inadequate understanding of the need for the change (Russell, 2017). People also resist change when the change endangers their jobs, their routines as well as their power or status in an organisation (University of Wisconsin-Milwaukee, 2017). When the benefits and rewards for implementing these changes do not outweigh the effort involved, the change is also not accepted (2017).

This resistance, however, can be successfully managed if the factors that give birth to the resistance can be identified and managed accordingly.

Lewin (1951) argued that resistance was something to overcome and potentially be prevented altogether, while Thomas and Hardy (2011) and Bareil (2013) perceived and approached it differently; resistance was something to be celebrated, in fact, resistance was invited to extort peculiar ideas on change (Van Eeden *et al.*, 2016). Piderit (2000), however points to the fact that individuals in charge tend "to blame others" and/or that management's interests tend to be favoured at the expense of the employees' interests.

This study serves to investigate whether resistance to change indeed exists at a South African mining surface operation, and if so, to what extent. The factors that contribute to the resistance will also be identified.

### **1.3 OBJECTIVES OF THE STUDY**

#### **1.3.1 Primary objective**

The primary objective of this study was to investigate if resistance to change is evident in employees, as stakeholders at a South African surface mining operation. Moreover, if resistance to change was found to be evident, this study aims to identify the extent of the resistance and to identify the factors that bring about resistance to change at this specific surface operations mining site.

### **1.3.2 Secondary objectives**

In order to achieve the primary objective, the following secondary objectives were constructed:

- Define the concept of resistance to change and evaluate the impact it has on organisations and employees according to literature.
- This specific study on the surface operations at mining organisations has not yet been conducted, thus no other published information exists on this specific subject. The study was to address this gap in the literature.
- Extensive studies in resistance to change topics have shown that affective commitment towards the organisation elicits positive perceptions of change valence. This is also directly related to lower the intent to resist change, which is why this investigation in the surface operations of mining organisations was important to conduct, to verify if it has the same effect.
- Further studies have shown positive interdependence between level of power and resistance. Also, resistance is more likely to take an active form when power levels are high and a passive one when power levels are low, thus it would be interesting to confirm this theory on this operation.
- To construct and validate a questionnaire based on the main factors contributing to change readiness and resistance to change.
- Examine the differences between the demographical variables with regard to the tendency for an individual to resist change in a surface mining operation in South Africa.
- This study aims to contribute to the development of effective change management systems to enable mining organisations to implement these effective change management practices.

## **1.4 SCOPE OF THE STUDY**

### **1.4.1 Field of study**

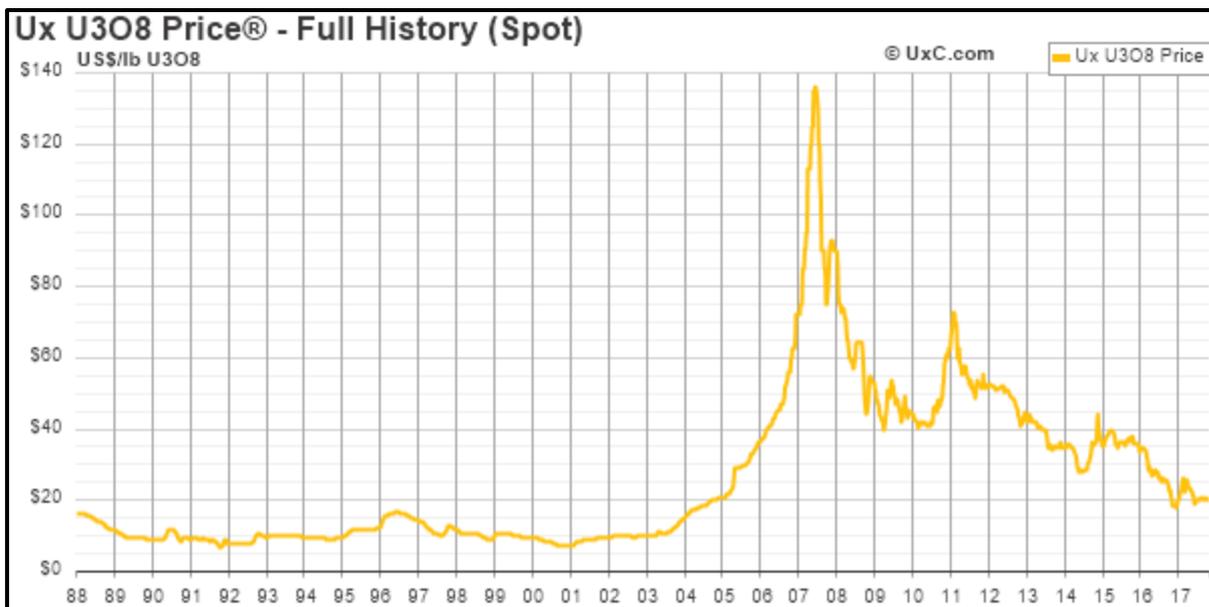
The field of this study focuses on the subject discipline of Human resources. Change affects humans; therefore, the specific field of study is Change management. Specific focus is in the readiness and resistance exerted by employees when change in an organisation is brought about.

The opinion of employees of a South African surface mining operation, as stakeholders of the specific operation, was measured and analysed to determine if resistance to change is evident,

and if so, to what extent. Factors contributing to the resistance was also considered and identified within this study.

#### 1.4.2 Institution under investigation

A well-known global mining company is currently forced to construct a viable plan to keep production and sustainability of one of their operations, situated in the Northwest Province of South Africa, afloat as market prices are constantly testing the robustness and profitability of this operation. Figure 1-1 shows the uranium price in US dollar per pound of uranium (US\$/lb U<sub>3</sub>O<sub>8</sub>) from 1988 to October 2017.



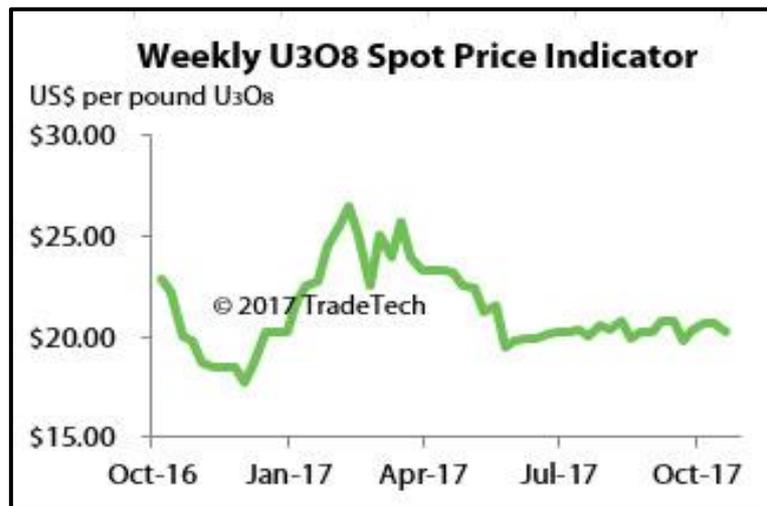
**FIGURE 1-1: UX U<sub>3</sub>O<sub>8</sub> PRICE® - FULL HISTORY (SPOT)**

**Source:** The Ux Consulting Company, LLC, 2017

The uranium price started rising in 2006, ending at US\$40/lb, where it advanced at great and fast growth, going beyond US\$80/lb in 2007, and finally booming in early 2008, at an astonishing high of US\$135/lb. The boom was short-lived and started declining straight after to approximately US\$76/lb in late 2008, and dropping to US\$41/lb early 2011. October 2011 again showed promise with a quick growth-sput to about US\$67/lb, but coming to a low in the first half of 2014 at just above US\$27/lb. The price, again, climbed small-scale to between US\$35 and US\$40/lb during the second half of 2014 and remained steady for the whole of 2015. 2016, however, was a disaster, testing every uranium producer's endurance, with the price declining to the lowest point for the past ten years, at US\$18/lb, in December 2016. A small incline to

US\$27/lb in January to April 2017 was short-lived as current prices are currently hovering around the US\$20/lb mark.

While this specific operation produces their product at a cost much higher than that of the current selling price, rapid decision-making and significant change is required in terms of how this company does business in the uranium industry if they are to survive the current economic challenges.



**FIGURE 1-2: WEEKLY U<sub>3</sub>O<sub>8</sub> SPOT PRICE INDICATOR**

**Source:** Weekly U<sub>3</sub>O<sub>8</sub> (2017)

Figure 1-2 shows that the uranium price currently has risen to slightly over US\$20/lb since the decline in 2016, but volatility and uncertainty in the market also suggest that the company is not out of the woods yet. The way in which this organisation does business need to be reconsidered, sooner rather than later. Current trends are demanding rapid, yet effective transformation.

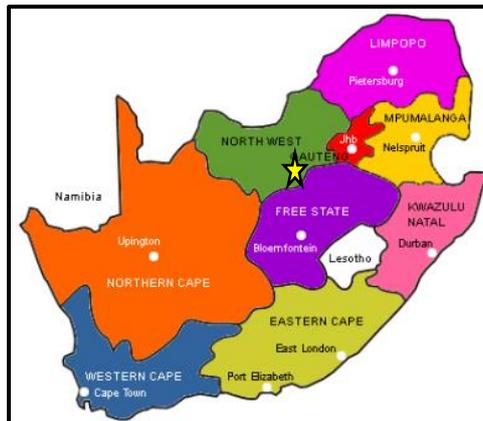
Therefore, this study aims to determine readiness to change and the extent to which resistance to change exists, if any. This study also identified factors which contribute to this operation's employees' resistance to change.

A review of the literature revealed that this type of investigation on the surface operations at mining organisations has not yet been conducted. By drawing a link between readiness and resistance to change, as well as the factors that bring about this resistance may benefit these types of organisations to reduce or even prevent resistance to change. Contributions of this study could include the development of effective change management systems to enable

management of these mining organisations to implement change management practices to ultimately manage successful transformations within their ever-changing operations.

### 1.4.3 Geographical demarcation

The study was conducted in a mining community, Vaal Reefs, which is situated in the North West Province in South Africa as illustrated by a star in Figure 1-3, below:



**FIGURE 1-3: MAP OF SOUTH AFRICA**

**Source:** Embassy of the Republic of South Africa (2012)

## 1.5 RESEARCH METHODOLOGY

### 1.5.1 Literature review

The literature review consisted of critically evaluating, reorganising and synthesising the works of others in journals, books, articles in newspapers and magazines, and on the world-wide-web using the key words: change management, resistance to change, readiness for change, change readiness, stakeholder level of power, affective commitment, mining environment, uranium. The literature review consisted of the following:

- where the topic fitted into the bigger picture,
- conceptual definitions, and
- a summary of existing approaches to the measurement of the relevant constructs.

### 1.5.2 Empirical study

The empirical study was conducted on one (1) specific mining organisation's surface operations site. These employees' opinions were measured and analysed to determine if readiness and resistance to change is evident, and if so, to what extent. In addition to this, factors contributing to this readiness and resistance were also considered and identified within this study.

The primary and secondary objectives were measured by means of a questionnaire, which was designed and constructed in accordance with the rules suggested by Welman *et al.* (2005). The study involved field work where these questionnaires were distributed to the permanent employees of this operation.

The non-experimental cross-sectional research investigation utilised a non-probability sampling methodology, in which self-selecting sampling took place.

In this study the analyses consisted of nominal-, ordinal-, interval- and ratio data. Thus the following quantitative data analyses took place: Frequency- and percentile distributions were constructed using a table where all the data was captured by the third party. From here the descriptive statistics, i.e. mean, mode, median, standard deviation, maximum and minimum was determined. Advanced methods of analyses were used in the form of correlations, regressions and analysis of variance.

Face validity was conducted on the questionnaire and the reliability thereof was calculated in collaboration with colleagues and the North-West University Statistical Consultation Services.

The internal consistency and reliability of the questionnaire were assessed by calculating Cronbach's alpha coefficients. Frequency distributions, independent *t*-tests and ANOVAs were calculated to determine the differences between the means of different groups within the selected demographic variables and the constructs.

Furthermore, effect size values (*d*-values), as by Ellis and Steyn (2003), were utilised to indicate if practical significant differences exist between demographical variables in terms of the change readiness and resistance variables.

## **1.6 LIMITATIONS OF THE STUDY**

This mining operation upon which the study was conducted permanently employs one hundred and thirty two (132) individuals. According to Els (2013), the ideal sample size for quantitative studies is two hundred (200), and limitations regarding sample size were therefore identified. The total population at the surface mining operation were targeted, but some could not participate due to absenteeism, leave and opting out of participation in the study. However, one hundred and one (101) out of the one hundred and thirty two (132) questionnaires were completed, representing a total uptake of 76.5% of the total population.

In addition to the above, limitations in terms of the command of the English language was a significant obstacle. An HR representative assisted with the translation of the questionnaire in order to ensure a global roll-out of the survey. The HR representative was also coached so as to understand how to answer any questions that the respondents might have and the researcher continuously monitored the survey process to ensure that the data-gathering process satisfied ethical and acceptable scientific standards.

Information on resistance to change within the mining industry, let alone surface operations was a challenge as no research could be found in the literature, especially within mining organisations.

## **1.7 LAYOUT OF THE STUDY**

### **1.7.1 Research design**

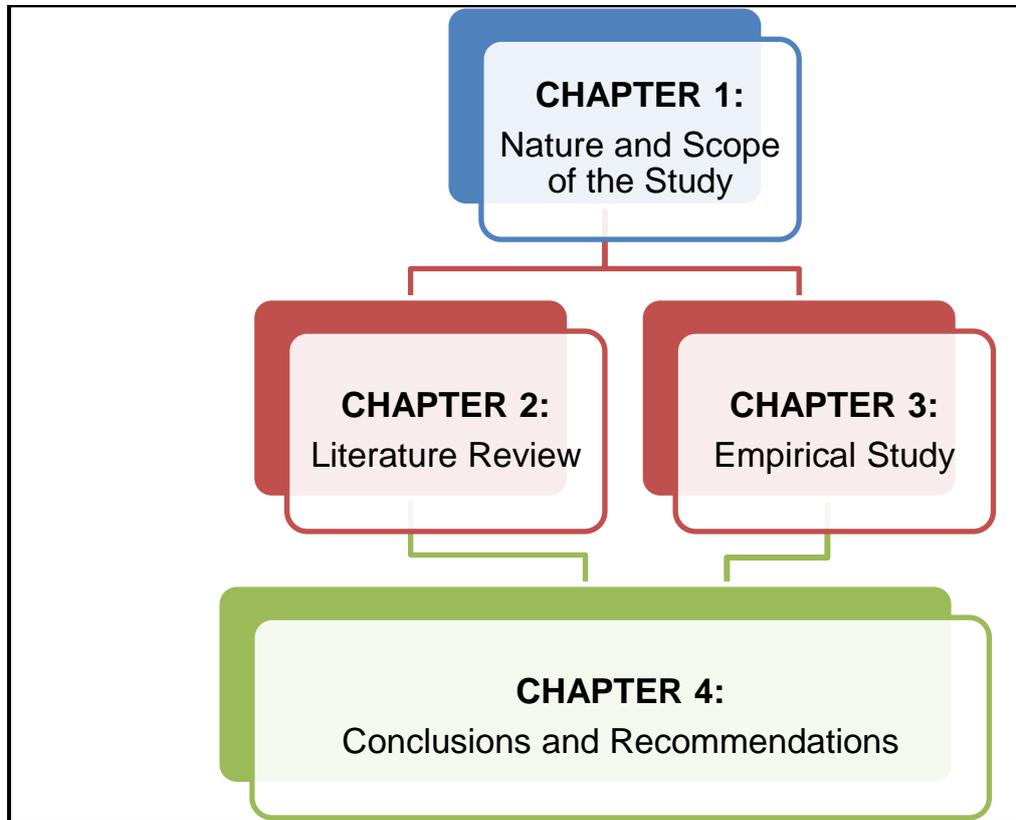
Quantitative research was conducted on the employees currently employed by the specific mining company's surface operation.

Empirical quantitative research, in the form of distributing questionnaires, was conducted on the targeted population, as stated above.

The study was a cross-sectional research design as it was a 'single point in time' study.

## 1.7.2 Layout of the study

**FIGURE 1-4: GRAPHICAL LAYOUT OF THE STUDY**



### **CHAPTER 1: Nature and scope of the study**

Chapter 1 exhibits the nature and scope of the study, in which the problem statement, primary and secondary objectives, the scope of the study, the research methodology in terms of how the empirical- and literature studies were conducted, limitations to the study as well as the layout of the study were consolidated and discussed.

### **CHAPTER 2: Literature review**

The literature review consisted of critically evaluating, reorganising and synthesising the works of others in journals, books, articles in newspapers and magazines, and the world-wide-web using the key words: change management, resistance to change, readiness for change, change readiness, stakeholder level of power, affective commitment, mining environment, uranium, in order to gain a thorough understanding on the subject of resistance to change.

The aim of the review was to obtain knowledge and understanding not only regarding the concepts of resistance to change, but supporting subjects such as change management and

change readiness were consulted in order to identify factors that could influence a person's experience and reaction to change.

### **CHAPTER 3: Empirical study**

Chapter 3 discussed the research methodology of the empirical study performed, the data gathering process, the measuring instrument utilised in this study as well as the statistical methods employed to analyse the gathered data. This penultimate chapter also presents and discusses the main findings.

### **CHAPTER 4: Conclusions and recommendations**

The concluding chapter consists of conclusions and recommendations from the findings obtained in the empirical study and the information gathered in the literature study. In closing, the achievement of the study objectives was assessed and recommendations on future research were made.

## **1.8 SUMMARY**

The first chapter exhibits the nature and scope of the study, in which the problem statement, primary and secondary objectives were determined. The scope of the study, which included the field of the study and the institution under investigation, was delineated. The research methodology in terms of how the empirical- and literature studies were conducted, was discussed and the limitations to the study as well as the layout of the study were consolidated and explained.

Chapter 2 inaugurates resistance to change and the factors which ultimately brings this resistance forth.

## CHAPTER 2: LITERATURE REVIEW

### 2.1 INTRODUCTION

A well-known global mining company is currently forced to construct an urgent plan to keep production and sustainability of one of their operations, situated in the Northwest Province of South Africa, afloat as market prices are constantly testing the robustness and profitability of this operation.

The primary objective of this study is to investigate if resistance to change is evident in employees, as stakeholders at a South African surface mining operation. Hitherto, the opinion of the employees was measured and analysed to determine if resistance to change is evident. Moreover, if resistance to change and change readiness were found to be evident, this study investigated the extent of the resistance and identified the factors that bring about resistance to change on this specific surface operations mining site.

Companies, like the one being investigated, are faced with tough economic climates, market demands and the like on a continuous basis which drives them to rethink and re-engineer the way they do business. This, often more than not, leads to strategic direction transformations, restructuring and staffing changes, in order to stay competitive or, in more-worse cases, stay in business.

Change is here to stay. Roberts (s.a.) in an article “Success means change”, states that “change is the engine that drives success”. He also asserts that industries will stagnate without change.

For this reason, Lewin’s force field model is relevant. His model confirms that forces exist, in particular driving forces and restraining forces (Lewin, 1951).

When change comes about, it is usually accompanied by uncertainty. Specifically, if organisational change comes about, it is accompanied by uncertainty amongst employees if not correctly managed. Uncertainty, however, as studied and confirmed by Bordia *et al.* (2004b), has numerous consequences. One of these consequences is resistance.

According to McKay *et al.* (2013), researchers started to investigate crucial factors which contribute to the success and sustainability of transformations in organisations, after a significant rate of failures in change implementation was reported by companies globally.

The literature review forms the foundation of the study to introduce the concepts of change, organisational change, change management, change readiness and resistance to change.

## **2.2 WHAT IS CHANGE?**

Change is defined by the free dictionary (2017) as “an act or process through which something becomes different”. The Greek philosopher, Heraclitus, according to Reference.com (2017), utilised the word farther and said that “change is the only constant in life”. Oreg *et al.* (2008) state that change is ubiquitous, *id est* it is everywhere. Roberts (s.a.) in an article “Success means change”, states that “change is the engine that drives success”.

The ever-changing market-demands force organisations to act accordingly by continually evolving, in which they need to counter and/or respond to the effects of these market demands. In order for these organisations to deal with the changes in the business environment and to capitalise and eventually profit from these changing opportunities, they need to evolve; in other words, change needs to take place. Changes could include, but is not limited to, process changes, restructuring, changes in systems, management changes, changes in leadership, strategy transitions and changes in the specific culture of the organisation.

## **2.3 ORGANISATIONAL CHANGE**

Basu (2017) states in an article on the website, Chron that organisational change relates to reviewing and modifying business processes and management structures. He further asserts that in order for an organisation to stay ahead of the competitors - business needs to be conducted more cost effectively and more efficiently. Organisational change is also defined as “shifting from the known to the unknown, by changing the status quo” (Dent & Goldberg, 1999; Eisenbach, Watson & Pillai, 1999). Roberts (s.a.) also asserts that industries will stagnate without change.

Kurt Lewin, one of the early pioneers in the field, developed one of the cornerstone models for understanding organisational change in 1940, and which still holds true today (Cummings & Worley, 2015).

Lewin's Change Management model describes three steps which are undergone during the change process:

1. Unfreezing stage,
2. Movement to a new level or change stage, and
3. Refreezing stage (Cummings & Worley, 2015).

Unfreezing, according to Lewin's model, is the process where the forces maintaining the status quo is reduced. Moving or changing, is the step where the interventions are introduced to the system to establish and foster new attitudes, behaviours and cultures. Refreezing, involves the organisation refreezing at a different, hopefully better placed level as before, with the new desired attitudes, processes, culture and/or habits established within the company (Lewin, 1951).

## **2.4 CHANGE MANAGEMENT**

To enable the company to transform successfully will require an assortment of interventions. These interventions usually involve and impact on people, specifically the stakeholders; both internally as well as externally. In order to administer these interventions successfully and to aid the change process, a competent, effective and efficient change management system needs to be at the order of the day.

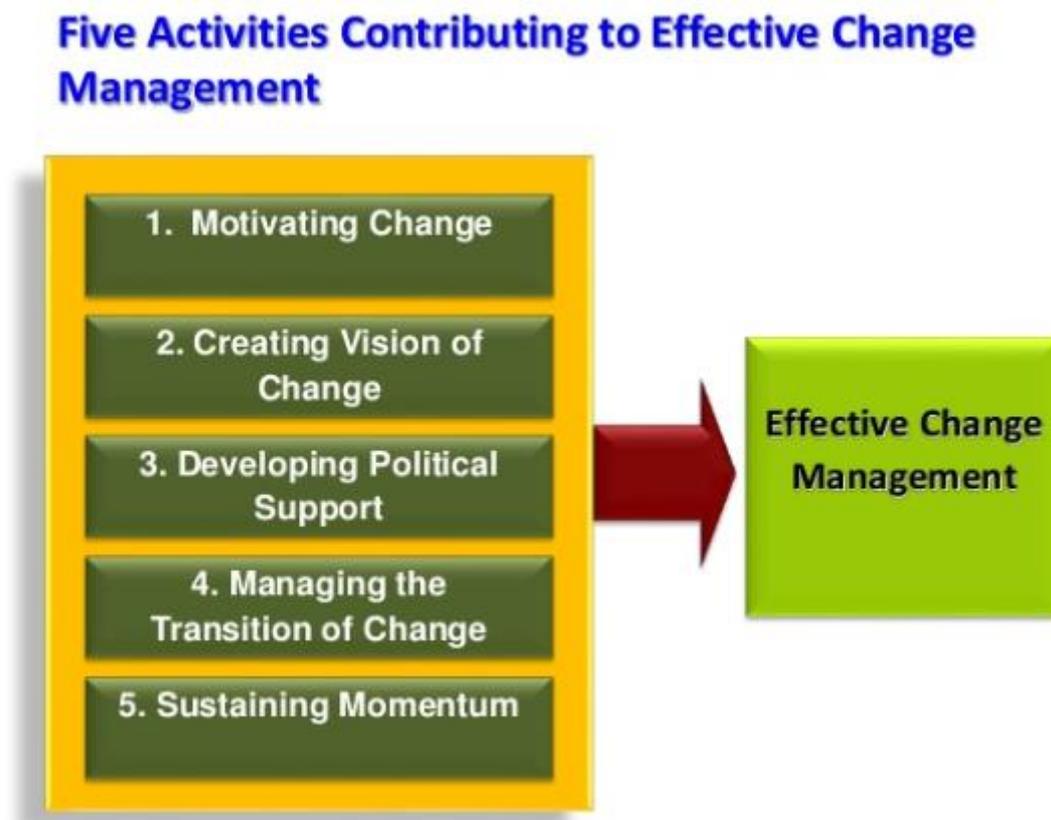
Change management is defined by Rouse (2015) as "a systematic approach to dealing with change both from the perspective of an organization and the individual". Rouse (2015) goes beyond this definition and states that the management of change has three facets to it, namely;

- adjusting to change,
- managing the change, as well as
- achieving the change.

Change management is an organisational process directed at empowering employees to accept and embrace changes in the current work environment (Ally *et al.*, 2016). According to Society for Human Resource Management (2007) as cited by Ally *et al.* (2016), the definition of change management is "a structured approach to transitioning individuals, teams, and organizations from a current state to a desire future state, to fulfil or implement a vision and strategy".

Historically, change management was conducted by determining the origins of the resistance to change and then suggesting means on taming it, according to Cummings and Worley (2015). On the other hand, other literature has opposed this stance and has rather stressed the creation of visions and wanted futures, obtaining support, and effectively managing the change toward them.

The activities contributing to effective change management can be summed up as in Figure 2.1 below:



**FIGURE 2-1: ACTIVITIES CONTRIBUTING TO EFFECTIVE CHANGE MANAGEMENT**

**Source: Cummings & Worley (2015)**

The activities in Figure 2-1, each representing a critical constituent in change leadership, are ranked in the order in which they are normally conducted.

Cummings and Worley (2015) elaborated on these five activities:

### **1. Motivating change**

Employees would normally not support change unless adequate reasons for the appropriateness of the change were effectively communicated to them (Cummings & Worley, 2015). The reason for this is that change is associated with uncertainty (DiFonzo & Bordia, 1998). Thus, it is vital for management to motivate the transition(s) accordingly and this requires focus to two related tasks:

#### **a. Creating readiness for change**

Generating an urge for employees to change would involve creating a felt necessity for transition by the employees. This would mean that employees would be made so discontented with the existing state of affairs that they would be open to change and, in some cases, initiate the change. Cummings and Worley (2015) list three techniques in which discontentment can be brought about:

- i. Sensitise companies to demands for change,
- ii. Disclose variations between status quo and the ideal, and
- iii. Project reliable positive prospects for the transition.

#### **b. Taming or overcoming resistance to change**

Implementing interventions have become a daunting, sometimes impossible, task as employees have the tendency to resist these changes. This resistance is further explained in section 2.5 below. Cummings and Worley (2015), however asserts three vital plans for positively managing resistance to change:

- i. Be genuinely interested in people's feelings and perceptions – be supportive and have empathy.
- ii. Communicate – it has been established in literature that people resist change because it is associated with uncertainty (DiFonzo & Bordia, 1998). In addition to this is that, if the change is not effectively communicated to the employees, rumours and gossip in terms of people, changes and politics surfaces. The trick, however, for managers is to interrupt this volley of information and ensure that employees are informed at all times.
- iii. Encourage employee participation and involvement.

## **2. Creating a vision**

A vision is defined by Thompson *et al.* (2013) as a description of a desired future state. Cummings and Worley (2015) elaborate on this in stating that it describes the organisation's core values and motive for existence. Thus, through creating and communication the vision, employees are empowered by a common goal and realise the reasoning behind the proposed change(s). Consequently, employees can be aligned with the vision and commit to doing whatever it takes. The authors, however, cautions against a vision which is perceived as impossible or interventions which cannot be achieved, as this will devitalise employee morale.

## **3. Growing political support**

In a political sense, an organisation may be seen as a loosely organised alliance in which individual persons or groupings of individuals revel in contrasting priorities and enjoyments. These individuals or groups contend with each other for control and assets, in that they fight to strengthen their own power within the organisation. When change is brought about in the organisation it endangers the balance of power amid these groups, due to uncertainty as to where the change will leave their existing power within the organisation. While some groups gain power, the other will lose, and consequent to this, political disagreements and disturbances will follow.

For this reason, change agents are concentrating on power and political activity and moving in a direction so as to use power strategies to acquire those in positions of influence to regard organisational development applications. The tasks which assist in managing the political dynamics of change include:

- a. assessing the change agent's power,
- b. identifying key stakeholders, and
- c. influencing stakeholders.

## **4. Managing the transition**

Lewin's Change Management model, which is described in section 2.3, describes the three steps which are undergone during the change process, unfreezing, transition and refreezing (Cummings & Worley, 2015). Applying this model to the organisational transition process it describes the process the organisation undergoes from the current state through the transition to finally end in the ideal future state.

Herewith the actions to be followed when managing the learning operation during change:

- a. activity planning,
- b. commitment planning,
- c. change-management structures, and
- d. learning operations.

#### **5. Sustaining momentum**

Employees tend to return to old habits once the initial excitement of change implementation subsides. Even more so if problems and challenges with change implementation are encountered (Cummings & Worley, 2015). Attention should be given to upholding the effort and energy levels within the team. These five activities assist in sustaining the momentum:

- a. supplying the needed resources for change,
- b. set up a support system for the change agents,
- c. upgrading competency- and skills levels,
- d. fortify new behaviours, and
- e. continue on track and on time.

## 2.5 RESISTANCE TO CHANGE

Resistance to change is defined by Peiperl (2005) as “active or passive responses on the part of a person or group that militate against a particular change, a program of changes, or change in general”.

### 2.5.1 Lewin’s force field analysis

Kurt Lewin developed another model over sixty years ago to explain the change process (McShane & Von Glinow, 2010); i.e. Lewin’s force field analysis model (Lewin, 1951).



**FIGURE 2-2: LEWIN’S FORCE FIELD ANALYSIS MODEL**

**Source: Nasser (2015)**

By consulting Figure 2-2 above, the left-hand side of the model is represented by the driving forces that are brought about by the demands for the organisation to change. These demands can include but is not limited to demands brought about by changing markets, political demands, the threat of the company becoming obsolete, new competitors, management changes, to name but a few. McShane and Von Glinow (2010) also lists another driving force, *id est* ‘devine discontent’ which means that leaders, on a continuous basis, goad employees to aim for higher goals or come up with new ideas even if the company is already a front-runner in its industry.

On the right-hand side of the model one will find the restraining forces which uphold the state of affairs. These restraining forces refer to the resistance to change (McShane & Von Glinow, 2010). The resistance to change comes about when employees lack motivation because of fear of the unknown and possibly due to perceiving that the negative aspects will dominate the

positive aspects. The fact that employees are not equipped with adequate skills, nor possess knowledge can also bring about resistance to change (McShane & Von Glinow, 2010). Other environmental factors can also cause resistance to change (Van Eeden, Sutherland & Scheepers, 2016).

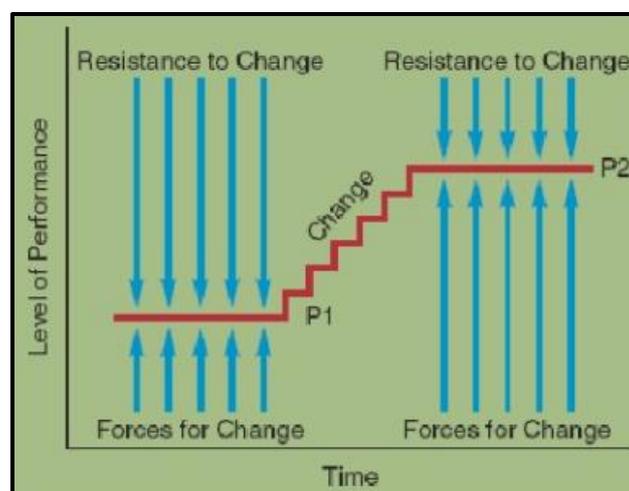
When these two sets of forces are of equal magnitude, this system is stable, *id est* in equilibrium. Thus, in order to have a system that is “pro-change”, it is important to either an increase the driving forces or to reduce the restraining forces. In order for the system to drive and favour change, the driving forces need to overpower the system.

However, increasing the driving forces of change is not necessarily the answer, but rather to decrease the restraining forces which will result in a smoother and more effective transition process for the organisation as a whole.

Figure 2-3 illustrates Lewin’s force field theory of change where the organisation’s current status quo is at P1, where the change takes place and the resultant of applying the change at P2. Note the ‘Resistance to Change’ forces BEFORE the change versus AFTER the change. It is clear that the resistance to change exerted on the status quo is much less after the change than before the change.

Lewin argued that resistance was something to overcome and potentially be prevented altogether (1951), while Thomas and Hardy (2011) and Bareil (2013) perceived it and approached it differently; resistance was something to be celebrated, i.e. resistance was invited to extort peculiar ideas on change (Van Eeden *et al.*, 2016).

**FIGURE 2-3: LEWIN’S FORCE FIELD THEORY OF CHANGE**



Source: Contemporary management. 2008.

## 2.5.2 Factors which impact on employees' resistance to change

According to Burnes (2015), employee resistance has been the most frequently quoted reason for most of the failures of organisational change initiatives (Erwin & Garman, 2010; Geisler, 2001; Lucas, 2002; Maurer, 1996; Oreg, 2006; Waddell & Sohal, 1998). Although people respond differently to change, employees' productivity, satisfaction, and commitment toward the organisation are impacted on when the organisation is encountering changes which include restructuring, downsizing, merging, and the like (Ashford *et al.*, 1989). This eventually causes feelings of anxiety, stress and insecurity within employees. Burke *et al.* (2008) and Diamond (2003) expressed that research studying human emotion in connection with change, has revealed that any transition to the status quo evolves into an encounter of personal loss for individuals. If the effect of change on employees' perception of security and trust in the organisation is ignored, effective implementation of the transition could be foregone, due to aggravated negative attitudes (McKay *et al.*, 2013). Focus should thus be given to employees' emotions and how they regulate these emotions during change, as this has a direct impact on the acceptance of the change (Gross, 2001).

Conner (1993) states that change, as a threat, affects employees' perception of job insecurity, depression and anxiety and therefore influence these employees' attitudes and eventually their resistance to change valence. While many authors argue that resistance to change is natural, general, unfounded and dysfunctional (Choi & Ruona, 2011; Ford *et al.*, 2008; Hon *et al.*, 2011; Self & Schraeder, 2009), many other authors, like Lewin (1951), maintain that resistance is something to be overcome and potentially be prevented altogether.

Piderit (2000) cautions against, when evaluating the resistance to change, the tendency for the individuals in charge "to blame others" and/or that management's interest is more favoured than the employees' interest.

Ford *et al.* (2008) state that by undertaking that resistance is only negative; change agents have overlooked its prospective benefits of increasing the probability of successful change implementation.

Ford *et al.* (2008) further stated that resistance is a type of conflict, and according to Amason (1996), conflict has been found to contribute positively to the decision-making process as well as commitment of employees to implement the decisions which were taken. Thus, potentially assigning resistance to change with the same power of influence.

The source of this resistance, according to many, is mainly attributed to the human species (Erwin & Garman, 2010; Judge *et al.*, 1999, Mumford *et al.*, 1993; Oreg, 2003; Thomas &

Hardy, 2011), while other literature supports that resistance to change arises from the organisational context (Burnes, 2015). Dent and Goldberg (1999) noted that “Lewin saw it as a ‘systems concept’”.

This study explores the following factors which could impact on employees’ reaction towards change:

#### **2.5.2.1 Stakeholder groups and their perceived power levels**

An assortment of stakeholders, both internal and external, is regularly affected by changes applied by an organisation (Ackerman & Eden, 2011; Ireland, Hoskisson & Hitt, 2013; Kotter & Schlesinger, 2008; Kuhn, 2008). In an article by Van Eeden *et al.* (2016), it is evident that some stakeholders exert more resistance to change than other. The authors’ study revealed specifically that internal stakeholders had a bigger probability of influencing the process of change than the external stakeholders.

The study also measured the levels of powers’ influence on change; whereupon it showed that a definite relationship exists between stakeholder groups and their perceived power levels. Van Eeden *et al.* (2016) also mentioned that the study displayed dependency between the levels of power and the group correlations with the organisation.

Another interesting finding in the study established that the perceived highest level of power stakeholders had the highest probability of having resistance, sixty-six percent (66%) of the stakeholders considered to have level 5 power signaled resistance, while only twenty-one percent (21%) of the level 1 stakeholders showed resistance. This study clearly confirmed that level of power and resistance showed positive interdependence (Van Eeden *et al.*, 2016).

#### **2.5.2.2 Affective commitment**

Commitment is summed up by Kumari and Afroz in two words: “attachment” and “loyalty” (2013). These two authors also define affective commitment as the psychological affection an employee has for an organisation, wherein how he/she associates with and is involved with the organisation (Kumari & Afroz, 2013; Allen & Meyer, 1990). Mathieu and Zajac (1990) described it as a ‘link that an employee has’ with an organisation. According to Holt *et al.* (2007), Judge *et al.* (1999), Oreg (2006) and Schweiger and DeNisi (1991), affective commitment has been recently identified as one of the most frequent ‘attitudinal consequences of organizational change’. A study by McKay *et al.* confirmed that employees with high affective commitment toward their organisations showed lower intent to resist the change (2013). In addition to this, it

was noted that these employees also had positive ideas of change valence (McKay *et al.*, 2013).

From this, it can be concluded that employees who feel a sense of belonging with their organisation are less probable to act negatively to a proposed initiative (McKay *et al.*, 2013).

### **2.5.2.3 Job satisfaction**

In a study conducted by Struijs, it was found that resistance to change was more evident in employees who were dissatisfied with their jobs (2012).

#### **2.5.2.3.1 Turnover intent**

Struijs (2012) also concluded that as a result of job dissatisfaction (and high levels of resistance), employees had a higher turnover intention, due to the fact that their job did not fulfil their needs and as a consequence would opt to find another job.

### **2.5.2.4 Cognitive dissonance**

The theory of cognitive dissonance was proposed by Leon Festinger in 1957, in which it alleged that people try to be consistent in their attitudes and behaviour. If not achieved, a “state of tension”, *id est*, cognitive dissonance, occurs when inconsistency is sensed in which our perceptions (cognitions), beliefs, attitudes and/or behaviours clash, which may bring about irrational and, at times, maladaptive behaviour, attitudes or beliefs, to name but a few, in individuals (Festinger, 1957). As humans, this feeling of dissonance is irksome (Jones, 1990), hence why we encourage ourselves to decrease it or do away with it completely, ultimately achieving inner peace (agreement) within one’s self. Individuals who are in a state of cognitive dissonance will try to reduce the extent of their dissonance in one of these three ways:

- change one or more of the behaviours, attitudes, beliefs,
- acquire new information, or
- decrease the importance of the perceptions (McLeod, 2008).

Applying the above to organisational change, it is with certainty that it can be said that if an organisation brings about change which is uncertain or conflicting with the beliefs and/or attitudes of the employees, resistance would be a reality (Burnes & James, 1995). According to Marrow (1969), Harwood was a reasonable and honest employer, but many employees felt deceived by Harwood when change was brought about in the company which involved salary cuts. This caused dissonance as the employees were experiencing a clash between their own belief that they should be treated with fairness and what they perceived as the company’s

betrayal of its allegiance to treating them fairly (Burnes, 2015). Resistance to Harwood's change initiatives aroused.

#### 2.5.2.4.1 Appropriateness of the change

It is probable for employees to resist a change on strategic and moral grounds, especially if they do not see the change as beneficial to the organisation nor to its stakeholders (Agocs, 1997; Oreg, 2006; Piderit, 2000). It was also confirmed with Holt *et al.* (2007), that if employees perceive the change as appropriate, it liaises the relationship between communication reasonableness and the intention to join in change-resistant behaviours. According to Burnes (2015), a potential crisis increases the degree of dissonance, in which it is hopefully realised that change is needed. This, in turn, will force employees into accepting and adapting to the change initiative(s). This inevitably results as a dissonance diffuser as employees see the need for change.

#### 2.5.2.4.2 Employees' personal perceptions about change

According to Cummings and Worley (2015), employees generally do not support change within an organisation due to the fact that it will potentially influence their level of worth, their coping abilities and their competencies. Technical resistance, political resistance and cultural resistance are the three sources from which resistance to change springs from, according to Cummings and Worley (2015). McShane and Von Glinow (2010) summarize the six most common reasons as to why employees resist to change:

- Employees' inclination tends to obstruct activities that will result in higher direct costs or activities that will lower the benefits already gained by these employees,
- People tend to resist the change in an attempt to prove the decision to be wrong or to deem the person coaxing the change as incompetent,
- Employees fear the unknown, as it increases the personal loss risk,
- Individuals dislike disruptions in their everyday routines and being taken out of their comfort zones. They do not necessarily like the idea of investing time and effort into learning something new,
- Out-of-sync team dynamics that prevent individuals from embracing the change, and
- Inconsistent organisational systems also discourages employees from change if they see that the same norms as in the past are not acted upon, or lived by the people trying to market the change.

#### 2.5.2.4.3 Ambivalent attitudes

Piderit (2000) explains three interviews which were conducted in her study, where the individuals experienced mixed emotions on the change initiatives proposed. Individual 1 exhibited an ambivalent attitude as he was confronted with disparity between his emotional and cognitive responses to his budget change proposal. Individual 2, a middle manager, was initially supportive of restructuring and centralisation of his firm, he quickly became negative upon observing his colleagues laxity. The third employee, a consultant, displayed ambivalence within the emotional element as he reacted with fear and excitement at learning that his company was merging with another consulting company. He, on the other hand, opted to find more information on the reasons on the merger and, with this, determined the job losses associated with the merger. Piderit warns, however, that acknowledging ambivalence is not always key (2000).

#### 2.5.2.5 Employee participation

A study was done to examine the way change agents were managing change, particularly focusing on employee participation, in which Schmuck and Miles (1971) found that the degree of employee involvement required for successful change implementation correlated to the psychological impact of the change on the employees. Huse (1980) who was also familiar with Lewin's work, incorporated work done by Harrison (1970), and asserted that the higher the intensity of the change intervention, the higher level of employee participation needed, if the employees are to accept changes (Burnes, 2015).

It would appear that resistance can be reduced by the way it is managed, in terms of employee involvement. In a 60-year review conducted by Oreg, Vakola and Armenakis in 2011, it was confirmed that change recipients who encountered higher degrees of participation were prone to higher levels of readiness and acceptance of change as well as revealed positive support to the change (Oreg *et al.*, 2011).

An addition to this, the view that resistance can be reduced by the nature of the change intervention itself, is supported; *id est*, the level to which it challenges the individual's psyche (Burnes & Jackson, 2011).

##### 2.5.2.5.1 Communication

In an article by McKay *et al.* (2013), it was found that change-related communication is the principal forecaster of readiness for change, and that if the change was adequately communicated in-time, it would make up for the absence in the decision-making participation of

the employees. Hence the reason why Armenakis and Harris (2002), Elving (2005), Goodman and Truss (2004) and Lines (2004) were cited. These authors have confirmed that if an organisation effectively communicates with its employees, *id est*, shares information with them, as well as promotes workforce participation in the planning and execution phases, the probability of employees extending input and assistance, is high (Armenakis & Harris, 2002; Elving, 2005; Goodman & Truss, 2004; Lines, 2004). This occurrence will be due to employees understanding and align with the scope and strategy supporting the change initiatives.

Ford *et al.* (2008) warn against contributing to the occurrence of resistance through communication breakdowns, failing to warrant the need for change, misleading the change recipients of the chances of the success, and lacking to call employees to action.

A characteristic feature of uncertainty is the feeling of doubt about the future and/or about cause and effect relationships associated with change (DiFonzo & Bordia, 1998). Uncertainty is associated with stress (Ashford, 1988; Pollard, 2001), intentions to quit (Johnson *et al.*, 1996), and negatively correlated with job satisfaction (Nelson *et al.*, 1995), commitment (Hui & Lee, 2000) and trust in the organisation (Schweiger & DeNisi, 1991). These negative consequences of uncertainty for psychological wellbeing are mainly attributed to the sense of a lack of control experienced by individuals (DiFonzo & Bordia, 1998). The uncertainty, in most cases, is more stressful to employees than the actual changes itself (Schweiger & DeNisi, 1991; Schweiger & Walsh, 1990).

Employees are more prone to accept change and cooperate if and when they are supplied with adequate and timeous information (Miller *et al.*, 1994; Wanberg & Banas, 2000).

#### **2.5.2.6 Dispositional resistance**

Burnes (2015) cited Oreg's research (Oreg, 2003, 2006; Oreg *et al.* 2011) in which it exhibited that those individuals differed in which they were psychologically 'disposed' to either embrace or resist change. In Oreg and other's studies were found that people who are dispositionally resistant to change are lacking the voluntary will to initiate changes and are more likely to have negative attitudes toward changes (Oreg *et al.*, 2008). Further to this, Oreg abandons the concept that the entire human species are wired to resist change, however, it reveals that some of these humans, with a high degree of dispositional resistance, will be inclined to be against change. In addition to this, Oreg confirmed that change recipients' response to change can be lessened by the relationship with the change agent (Oreg & Sverdlik, 2011).

### 2.5.2.7 Change readiness

Block and Keller (1998) suggest that change readiness mostly came from the health psychology and medical studies disciplines, before extending to the organisational fields.

Self cites Lewin's (1947) notion of change, where employees are to release the status quo by physically and psychologically letting go of the existing state of affairs (2007).

Cummings and Worley (2015), states that one of organisational development's main principles suggests that an employee's readiness for change counts on fabricating a felt need for change. Employees need to perceive the current status quo as being so bad that it needs to change, so as to motivate new ways of doing business, *id est* new processes, new routines, new attitudes, to name but a few. Readiness, according to McShane and Von Glinow (2010), alludes to an employee's or work team's knowledge and skills to conduct a task without the assistance of the leader, as well as an employee's or a work team's disposition to do the task.

Holt *et al.* (2007) describe the readiness for change, a multidimensional formulation, through four elements;

- Appropriateness: where employees perceive that the change is appropriate for the organisation,
- Managerial support: where employees feel that management is supporting the change,
- Self-efficacy: where employees feel empowered enough with their skills and competencies so that they can handle the change,
- Personal valence: where employees trust that the change will bring about personal benefits.

Armenakis *et al.* (1993) focus on two main tasks to be taken to ensure employees' readiness:

- Communicate a clear difference between the existing state of affairs and the ideal future, and
- Build the employees' confidence levels up in assuring them that they have the knowledge, abilities and skills to handle what is needed to achieve the ideal future.

Holt *et al.* (2007) also concluded that employees, who are involved in the change and actively participate in the transformation, are more likely to accept the change and cooperate in executing it. Thus, inevitably reducing the restraining forces which oppose the driving forces of change. Self (2007) describes the five elements for producing readiness for change; *id est*, discrepancy, appropriateness, principle support, efficacy, and valence, as put forward by

Armenakis *et al.* (1999), provided management with a method by which readiness for a change initiative is created, directing to the acceptance of or adoption of the proposed change initiative, as opposed to the rise of resistance to the change initiative.

Madsen *et al.* (2005) found, and as was seen previously in chapter 2.5.2.2, that if employees feel a sense of commitment toward their organisations, they tend to be more open to initiatives to change.

McKay *et al.* (2013) came up with the following conclusions regarding change readiness:

- Readiness for change is brought about through adequate and timeous communication about the change,
  - It was found that with non-managerial employees, timeous and adequate information may counteract lack of employee involvement in the change's planning and implementation phases.
- Affective commitment in employees had constructive readiness for change valence.
  - Affective commitment was associated with lower resistance to change.

## **2.6 SUMMARY**

A literature review was conducted in this chapter, which included change, organisational change, change management and resistance to change and were discussed at length.

Within the change management chapter, the five activities contributing to effective change management were discussed, as literature has stressed the creation of visions and wanted futures, obtaining support, and effectively managing the change toward them:

1. Motivating change,
2. Creating vision of change,
3. Developing political support,
4. Managing the transition of change, and
5. Sustaining momentum.

Resistance to change and Lewin's force field analysis model were discussed.

Factors which impact on employees' resistance to change and change readiness were discussed in detail.

It was found that the perceived highest level of power stakeholders had the highest probability of having resistance, sixty-six percent (66%) of the stakeholders considered to have level 5 power signaled resistance, while only twenty-one percent (21%) of the level 1 stakeholders showed resistance. This study clearly confirmed that level of power and resistance showed positive interdependence (Van Eeden *et al.*, 2016).

From the literature review can be concluded that employees who feel a sense of belonging to their organisation are less probable to act negatively to a proposed initiative (McKay *et al.*, 2013).

Further to this, it was found that job dissatisfaction results in higher turnover intent as well as higher levels of resistance to change (Struijs, 2012).

Cognitive dissonance; in terms of the appropriateness of the change (Agocs, 1997; Oreg, 2006; Piderit, 2000), employees' personal perception of change, (Cummings & Worley, 2015; McShane & Von Glinow, 2010), and ambivalent attitudes (Piderit, 2000), increase the resistance to change valance.

Employee participation, in terms of communication, and more specifically, uncertainty due to lack of communication, has negative consequences for psychological wellbeing and are mainly attributed to the sense of a lack of control experienced by individuals (DiFonzo & Bordia, 1998). The uncertainty, in most cases, is more stressful to employees than the actual change itself (Schweiger & DeNisi, 1991; Schweiger & Walsh, 1990). Thus, employees are more prone to accept change and cooperate if and when they are supplied with adequate and timeous information (Miller *et al.*, 1994; Wanberg & Banas, 2000).

Consequently, these and other factors discussed in the literature review contribute to employees' resistance to change and change readiness.

Chapter 3 will explore twelve (12) factors which contribute to employees' resistance to change and change readiness.

## CHAPTER 3: EMPIRICAL STUDY

### 3.1 INTRODUCTION

The primary objective of this study was to investigate if resistance to change is evident in employees, as stakeholders, at a South African surface mining operation. Moreover, if resistance to change was found to be evident, this study investigated the extent of the resistance and identified the factors that bring about resistance to change on this specific surface operations mining site. In order to achieve the primary objective, secondary objectives were constructed and divided into two sections, the literature review and the empirical study.

The literature review focused on resistance to change and the factors which brings about resistance within employees. Factors, including but not limited to personal competency, perception of change, change readiness, affective commitment and job satisfaction, were studied and reported on.

Chapter 3 focused on the opinion of the employees, as stakeholders, at a South African surface mining operation with regards to resistance to change.

This study was conducted by distributing questionnaires to the permanent employees of the operation under investigation. The questionnaire, in terms of sections and questions were discussed in full within this chapter.

Face validity was conducted on the questionnaire used, as well as, with the assistance of the North-West University Statistical Consultation Services and reliability was computed by making use of Cronbach's Alpha.

The reader enjoys understanding into the methodology and procedures used in obtaining the information for the empirical research of this investigation. The study population, method of sampling as well as sample size are described within this chapter. The demographic structure, presentation and discussion of the research outcomes were also summarized within this chapter.

Frequency distributions, means, standard deviations,  $p$ -values and  $d$ -values were calculated.

### **3.2 GATHERING OF DATA**

Permission was granted by management of the South African mining surface operation under investigation to conduct a study utilising their employees.

The non-experimental cross-sectional research investigation utilised a non-probability sampling methodology, in which self-selecting sampling took place.

Questionnaires were distributed to all of the operation's permanent employees with the assistance of a Human resources (HR) representative of the operation. Hard copies were printed and distributed to the employees. The participants, on a voluntary basis, followed the instructions and completed the questionnaires right then and there by selecting the most relevant and correct option. In addition to the above, limitations in terms of the command of the English language was a significant obstacle. An HR representative assisted with the translation of the questionnaire in order to ensure a global roll-out of the survey. The HR representative was also coached so as to understand how to answer any questions that the respondents might have and the researcher continuously monitored the survey process to ensure that the data-gathering process satisfied ethical and acceptable scientific standards. The participants then finally returned their filled-out questionnaires to the HR representative, whereupon he sealed the questionnaires in an envelope and returned it to the researcher.

### **3.3 TARGET AND STUDY POPULATION**

The target and study population were the employees of the South African mining organisation's surface operation. This operation employs one hundred and thirty-two (132) people on a permanent basis, thus one hundred and thirty-two (132) questionnaires were distributed to all of these individuals.

The non-experimental cross-sectional research design utilised a non-probability sampling method, with employees of the South African mining surface operation under investigation self-selecting participation on a voluntary basis to complete the questionnaires. The editors, Bickman and Rog (2008), define any quantitative research other than probability sampling as "convenience sampling", which this study utilised.

With the assistance of the operation's HR representative the author could successfully convey the purpose of the study to the potential respondents. All information on the informed consent brief was explained and translated to vernacular for those individuals who struggled to

understand the English language. The researcher continuously monitored the survey process to ensure that the data-gathering process satisfied ethical and acceptable scientific standards.

Sampling size, according to Els (2013), is based on eight (8) factors which includes, but is not limited to, the type of research to be conducted, financial constraints, the importance of the results, the number of variables studied, the accuracy needed, the margin of error which can be absorbed and the size of the population. The response rate is also a contributing factor towards the sample size as people might refuse to respond, thus it is suggested to try to draw a larger sample than required. One hundred and four questionnaires were returned, with three not completed in full and consequently discarded. Thus, one hundred and one (101) respondents successfully completed the questionnaire. The response rate was therefore 76.5% of the total targeted population.

### **3.4 QUESTIONNAIRE USED IN THE STUDY**

Each questionnaire was accompanied by an informed consent letter, in which it was emphasised that no intentional risks or harm were anticipated as a result of any individual's participation. Confidentiality and anonymity of the respondents were guaranteed also via the informed consent letter.

A structured questionnaire was constructed and distributed to investigate the opinion of employees, as stakeholders of a South African surface mining operation, in terms of their resistance to change and change readiness. A cross-sectional research design was used to investigate relationships between the employees' resistance to change and factors which literature had suggested.

Face validity was conducted on the questionnaire used, as well as, with the assistance of the North-West University Statistical Consultation Services, reliability was computed.

The following deliberations for developing and constructing questionnaires, which are set out by Welman *et al.* (2005), were adhered to:

- The questionnaire was made-up of close-ended questions in order for the respondents to choose between the predetermined answers, i.e.; strongly disagree, disagree, neutral, agree, and strongly agree.
- The categories reflected in the alternatives were mutually exclusive.

- The type of questions formulated, made it easy for the respondents to choose between the alternatives. The alternatives are well within what the respondent's answer would have been if an open-ended question would have been asked.
- The words and concepts are easily understandable by the selected respondents, as brief, focused and straight-forward questions were formulated.
- No offensive terms were used.
- All questions were concise and no ambiguity was present in any of the questions.
- The questions were neutral, and it was carefully planned so as to not have any leading questions included in the questionnaire.
- A justified sequence was used.
- The questionnaire was posed to employees employed at the operation under investigation, thus all of the questions were appreciable by all respondents.
- The layout of the questionnaire was easy to follow, to read and to understand.

Each question's answers were assigned codes so as to permit easy data capturing within the desired computer program.

One question, question 53 in the questionnaire, however, was an open-ended question where space was left for the respondent to freely write what he/she would change if they were the key decision makers of the operation. No prior list of answers was assigned to this question.

Although the above was applied to the questionnaire's design, the author was still challenged with individuals who could not understand nor read English. Thus, with the assistance of the operation's HR representative the author could successfully convey the purpose of the study to the potential respondents. All information on the informed consent brief was explained and translated for those individuals who struggled to understand English. The HR representative also aided, by explaining each question to respondents who were unable to read and/or understand the English questions. In addition, careful planning and coaching of the HR representative followed, focussing on, specifically, not leading responses of respondents.

Twelve (12) factors were investigated which were derived from the literature review in section 2. These twelve (12) factors were:

1. Personal competency
2. Job satisfaction
3. Intention to quit
4. Affective commitment

5. Work-related basic needs satisfaction
6. Perceived level of power
7. Employee's perception of change (Only questions 48 to 52)
8. Employee's perception of change (*\*\*Perception of change 2 relates to all questions concerned with the respondents' perception of change, id est, questions 48 to 52 as well as the inclusion of question 45, id est, "Are you against change?"...which is also a question pertaining on how they 'feel' about change in general.*)
9. The direct question: Are you against change?
10. Change readiness of non-managerial employees
11. Change readiness of management employees
12. Change readiness of senior management employees

From the above, the questionnaire was designed and comprised of six (6) sections:

#### **3.4.1 Section A: Demographic information**

In this section the respondent's demographics were requested: Gender, age in years, race, highest qualification obtained, current level of employment on the operation and how many years of experience the respondent has in their current employment position.

#### **3.4.2 Section B: Union affiliation**

Section B consisted of three questions:

1. Are you a member of a union?
2. If yes, which union are you a member of?
  - a. The four main unions were listed and the respondent could choose the correct answer.
3. If yes in 1, what role do you fulfil in this union?
  - a. Eight (8) options were listed, which ranged from member, section steward, plant committee member, women structure member, education structure member, skills and development structure member, health and safety structure member or a branch committee member.

As literature suggests and quoted in chapter 2.5.2.1, a study by Van Eeden *et al.* (2016) measured the levels of powers' influence on change; whereupon it showed that a definite relationship exists between stakeholder groups and their perceived power levels. Another finding in the study established that the perceived highest level of power stakeholders had the

highest probability of having resistance, sixty-six percent (66%) of the stakeholders considered to have level 5 power signaled resistance, while only twenty-one percent (21%) of the level 1 stakeholders showed resistance. The above study clearly confirmed that level of power and resistance showed positive interdependence (Van Eeden *et al.*, 2016).

### **3.4.3 Section C: Personal competency levels**

It is stated in chapter 2.5.1 that the fact that employees are not equipped with adequate skills, nor possess knowledge can also bring about resistance to change (McShane & Von Glinow, 2010). According to Cummings and Worley (2015), employees generally do not support change within an organisation due to the fact that it will potentially influence their level of worth, their coping abilities and their competencies (chapter 2.5.2.4.2). Hence why the following seven (7) questions were asked in Section C of the questionnaire:

1. Do you understand your roles and responsibilities toward your job?
2. Do you feel competent in your job?
3. Do you master the tasks at your job?
4. Are you good at your job?
5. Do you feel in control while doing your normal day-today tasks?
6. Do you feel in control when you need to sort out a problem?
7. Do you depend on others to sort out problems in your area of responsibility?

The respondents were expected to indicate which of these answers: strongly disagree, disagree, neutral, agree or completely agree, they relate to the most.

### **3.4.4 Section D: Job satisfaction, Intention to quit, Work-related basic need satisfaction & Affective commitment**

Section D consisted of questions which measured the respondents' job satisfaction, intention to quit, work-related basic need satisfaction, as well as their affective commitment toward the company. The respondents were expected to indicate which of these: strongly disagree, disagree, neutral, agree or completely agree, they relate to the most.

#### **3.4.4.1 Affective commitment**

In chapter 2.5.2.2 it was stated that according to Holt *et al.* (2007), Judge *et al.* (1999), Oreg (2006) and Schweiger and DeNisi (1991), affective commitment has been recently identified as one of the most frequent 'attitudinal consequences of organizational change'. A study by McKay *et al.* confirmed that employees with high affective commitment toward their organisations

showed lower intent to resist the change (2013). In addition to this, it was noted that these employees also had positive ideas of change valence (McKay *et al.*, 2013).

The questions included in the questionnaire which measured the respondents' affective commitment were:

1. Do you feel part of a team at work?
2. Do you feel part of a family at work?
3. Do you feel 'a sense of belonging' towards the organisation?
4. Do you feel that the organisation's challenges are your own?
5. Do you enjoy discussing your organisation with other people, who is not employed by this organisation?
6. Does your organisation have a great deal of personal meaning to you?
7. Would it be hard for you to leave your organisation right now, even if you wanted to?
8. Would you quit your job if you did not have another job lined up?
9. Is the reason for you being at your organisation due to
  - a. financial constraints/obligations?
  - b. desire?
  - c. convenience for you?

#### **3.4.4.2 Work-related basic need satisfaction (W-BNS)**

An individual's basic psychological needs for freedom, capability and relatedness have been found to be a critical forecaster of a person's optimal functioning in different life realms (Van den Broeck *et al.*, 2010). Hence why these three (3) questions were posed in the questionnaire:

1. Do you socialize with people at your workplace?
2. Are some of your colleagues close friends of yours?
3. Do you often feel alone when you are at work?

#### **3.4.4.3 Job satisfaction & turnover intent**

As per chapter 2.5.2.3, a study conducted by Struijs (2012) was found that resistance to change was more evident in employees who were dissatisfied with their jobs. The author also concluded that as a result of job dissatisfaction (and high levels of resistance), employees had a higher turnover intention, due to the fact that their job did not fulfill their needs and as a consequence would opt to find another job.

Questions included in the questionnaire which measured the above two (2) factors were obtained from Hellgren *et al.* (1997), Sjöberg & Sverke (2000) and Brayfield *et al.* (1951):

1. Are you satisfied with your job?
2. Are you content with the job you have?
3. Do you enjoy being at work?
4. Are you generally happy in the plant?
5. Do you feel safe at the plant?
6. Do you feel that you could leave your job now?
7. Are you actively looking for other jobs?

### **3.4.5 Section E: Perceived level of power, Employee participation, Resistance to change, Personal perception of change and “What would you change?”**

Section E comprised of questions which measured the respondents' perceived level of power, their participation levels within the organisation, if they resist change and their personal perception of change. One question, question 53 in the questionnaire, however, was an open-ended question where space was left for the respondent to freely write what he/she would change if they were the key decision makers of the operation. No prior list of answers was assigned to this question.

#### **3.4.5.1 Perceived level of power**

Along with the questions in Section B, these questions were included in the questionnaire to measure the employees' perception on power levels within the organisation:

The respondents were expected to indicate from these groups: employees, organised labour (unions), management (authority on plant-level), senior management (authority levels above plant-levels), directors or shareholders they perceive as:

1. Having the most say when making decisions which would influence the processes on the plant?
2. Having the least say when making decisions which would influence the processes on the plant?
3. Having the most say when making decisions regarding strategies, finances, etc. on the plant?
4. Having the least say when making decisions regarding strategies, finances, etc. on the plant?
5. Having the most say when making decisions in the organisation?

## 6. Having the least say when making decisions in the organisation?

### 3.4.5.2 Employee participation

As per chapter 2.5.2.5, it would appear that resistance can be reduced by the way it is managed, in terms of employee involvement. In a 60-year review conducted by Oreg *et al.* (2011), it was confirmed that change recipients who encountered higher degrees of participation were prone to higher levels of readiness and acceptance of change as well as revealed positive support to the change.

The respondents were subjected to “Do you have any input on revising processes, procedures and/or policies?” upon which they could choose one of these answers: never, sometimes, frequently or always.

Also, the respondents were expected to indicate which of these: strongly disagree, disagree, neutral, agree or completely agree, they relate to the most when faced with these questions within the questionnaire:

1. Do you feel that you have influence on any transformation/change that takes place in your workplace?
2. Do you have input on any decisions made within your organisation?

### 3.4.5.3 Resistance to change

The primary objective of this study was to investigate if resistance to change is evident in employees, as stakeholders at a South African surface mining operation, thus the following question was posed to the respondents: “Are you, generally, AGAINST change?”. This question could have been answered by one of the following options: No, I embrace change, No, I do not mind change, Neutral, Yes, I am against change or Yes, I am completely against change.

### 3.4.5.4 The employees’ personal perception of change

As was seen in chapter 2.5.2, many factors exist which influences an individual’s perception or general feel towards change. As was seen in chapter 2.5.2.4, individuals who are in a state of cognitive dissonance will try to reduce the extent of their dissonance in one of these three ways:

- change one or more of the behaviours, attitudes, beliefs,
- acquire new information, or
- decrease the importance of the perceptions (McLeod, 2008).

Applying the overleaf to organisational change, it is with certainty that it can be said that if an organisation brings about change which is uncertain or conflicting with the beliefs and/or attitudes of the employees, resistance would be a reality (Burnes & James, 1995).

In Oreg's study, as per chapter 2.5.2.6, was found that people who are dispositionally resistant to change are lacking the voluntary will to initiate changes and are more likely to have negative attitudes toward change (Oreg *et al.*, 2008).

Uncertainty, as studied and confirmed by Bordia *et al.* (2004b), has numerous consequences, one of these consequences being resistance. As was seen in 2.5.2.5.1, uncertainty is associated with stress (Ashford, 1988; Pollard, 2001), intentions to quit (Johnson *et al.*, 1996), and negatively correlated with job satisfaction (Nelson *et al.*, 1995), commitment (Hui & Lee, 2000) and trust in the organisation (Schweiger & DeNisi, 1991). These negative consequences of uncertainty for psychological wellbeing are mainly attributed to the sense of a lack of control experienced by individuals (DiFonzo & Bordia, 1998). The uncertainty, in most cases, is more stressful to the employees than the actual change itself (Schweiger & DeNisi, 1991; Schweiger & Walsh, 1990).

Employees are more prone to accept change and cooperate if and when they are supplied with adequate and timeous information (Miller *et al.*, 1994; Wanberg & Banas, 2000).

To measure the factors above, the following questions were included in the questionnaire:

1. Does change make you feel uncertain?
2. Does the idea of change make you feel negative about it?
3. Do you feel that your job is threatened when change is brought about in the workplace?
4. Do you feel that you will lose more than you will gain, when change is applied?
5. Do you believe that change is currently needed within your organisation?

The respondents were expected to indicate which of these: strongly disagree, disagree, neutral, agree or completely agree, they relate to the most.

### **3.4.6 Section F: Perceived level of change readiness**

Section F measured the respondents' perceptions on the following groups: Non-managerial employees, Managerial employees and Senior management employees:

1. Willingness to accept and implement change,
2. Capabilities to manage and implement change, and
3. Competencies to plan, manage and implement change.

The respondents were expected to indicate which of these options apply to these groups the most:

- not at all,
- not willing/capable/competent,
- neutral,
- willing/capable/competent, or
- very willing/capable/competent.

### 3.5 CONFIDENTIALITY

Confidentiality in who participated as well as in their answers were guaranteed to all respondents via the informed consent letter as well as by the author personally. Respondents' sole results were administered and were not revealed.

### 3.6 STATISTICAL ANALYSIS OF DATA

The data captured was analysed by the North-West University Statistical Consultation Services. As per chapter 1.5.2, the questionnaire's internal reliability was assessed by computing the Cronbach's alpha coefficients. The variances between the means of different groups, within the selected demographic variables and the twelve (12) possible factors being investigated, were determined by calculating the frequency distributions, means, standard deviations, independent *t*-tests and ANOVAs. In addition, effect size values (*d*-values), as by Ellis and Steyn (2003:92), were utilised to indicate if practical significant differences between any demographical variables regarding the constructs exist.

### 3.7 RESPONSES TO THE SURVEY

Table 3-1 below displays the response rate of the questionnaire:

**TABLE 3-1: RESPONSES TO THE SURVEY**

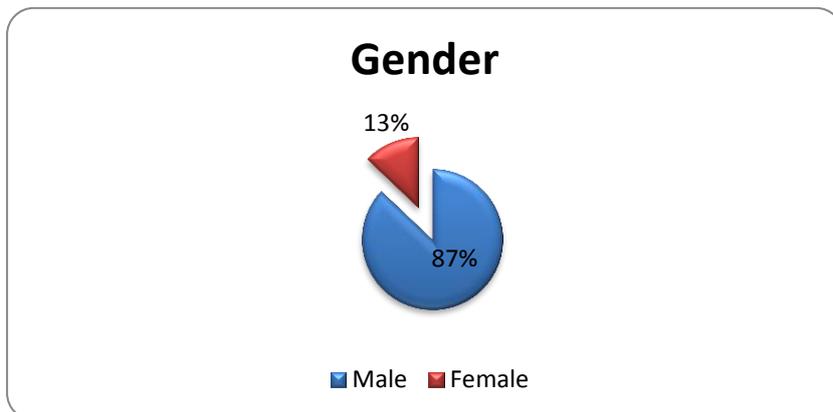
Questionnaires	Frequency	Percentage
Distributed	132	100.0%
Returned	102	77.3%
Discarded	1	0.8%
Analysed	101	76.5%

In the population and as per table 3-1, the organisation permanently employs one hundred and thirty-two (132) individuals. According to Els (2013), the ideal sample size for quantitative studies is two hundred (200), and limitations regarding sample size were therefore identified. The total population at the surface mining operation were targeted, but some could not participate due to absenteeism, leave and opting out of participation in the study. However, one hundred and one (101) out of the one hundred and thirty-two (132) questionnaires were completed, representing a total uptake of 76.5% of the total population.

### 3.8 DEMOGRAPHIC INFORMATION OF THE RESPONDENTS

Section A of the questionnaire consisted of the respondent's demographical information, *id est* gender, age in years, race, highest qualification obtained, current level of employment on the specific operation and how many years of experience the respondent, to date, has in their current employment position.

#### 3.8.1.1 Gender of respondents

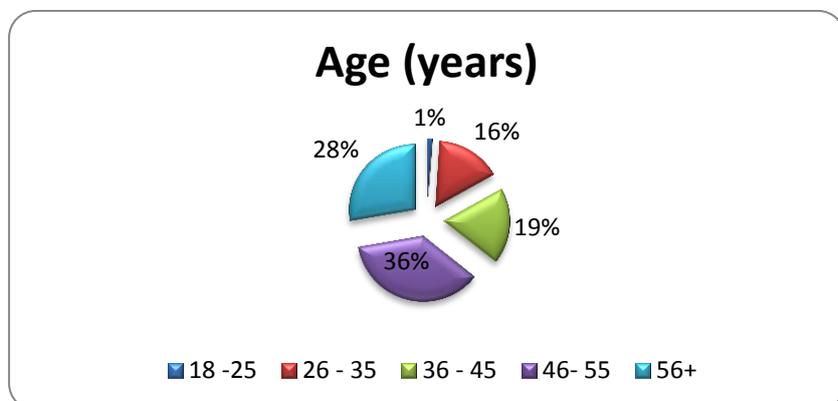


**FIGURE 3-1: GENDER**

The targeted population comprise of approximately 14% of females. Therefore, the sample of 13% females is representative of the operation being investigated. 87% of the respondents are males.

### 3.8.1.2 Age of respondents

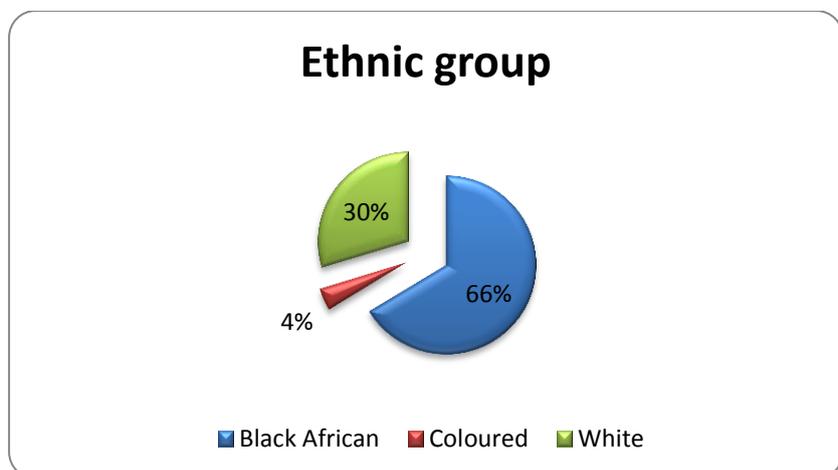
The respondents were requested to indicate their age by choosing the predetermined category most relevant.



**FIGURE 3-2: AGE (YEARS)**

The highest number of respondents fall between the ages of 46 and 55 years of age; 36% of total sample. While the second highest category recorded was for the ages between 36- and 45 years; at 19%. Only 1 respondent is younger than 26years.

### 3.8.1.3 Respondents' ethnic groups



**FIGURE 3-3: ETHNIC GROUP**

Figure 3-3 shows that the majority of respondents (at 66%) are from the Black African group, while 30% are White and the residual 4% indicated that they are from the Coloured ethnic group.

### 3.8.1.4 Respondents' highest qualifications obtained

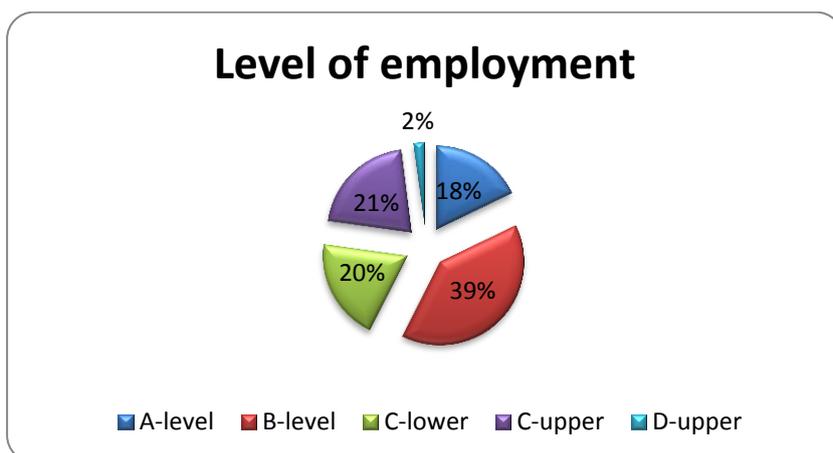


**FIGURE 3-4: HIGHEST QUALIFICATION OBTAINED**

It can be seen from Figure 3-4 that majority of the respondents do have at least a Matric qualification. 41% of respondents do not hold this qualification and 30% of respondents are in possession of a tertiary qualification.

### 3.8.1.5 Respondents' level of employment within the organisation

Figure 3-5 displays the distribution of the hierarchy within this operation's organogram. The Paterson grading, as being used on this operation, was used to classify these categories (Paterson grading, 2017).



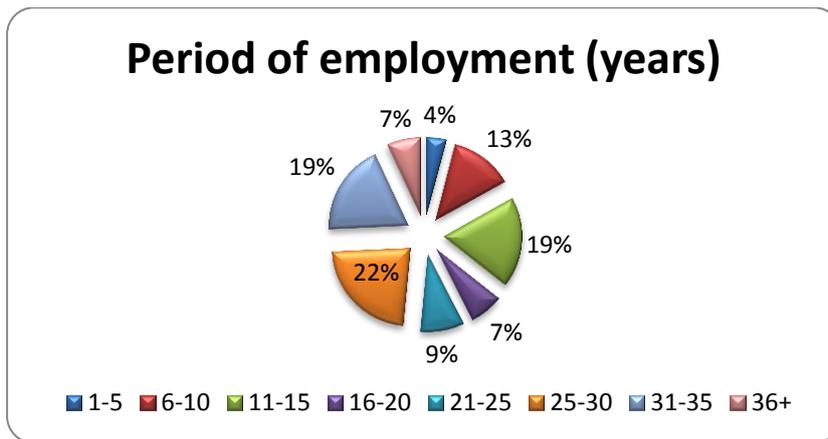
**FIGURE 3-5: LEVEL OF EMPLOYMENT**

In Figure 3-5 it can be seen that 2% of respondents are representing the management portion (D-upper) of the sample, while 21% of the respondents are in supervisory roles (C-upper).

The remaining 77% (18% = A-level, 39% = B-level, and 20% = C-lower) which represents 78 non-managerial employees, is made up of, assuming that 78 (sub-sample) is equal to 100%:

- 23% being employed in the A-level,
- 51%, who does not fall into supervisory- or higher positions, are employed in the B-level category, and finally
- 26% of these respondents are categorised in the C-lower category.

### 3.8.1.6 Respondents' period of employment

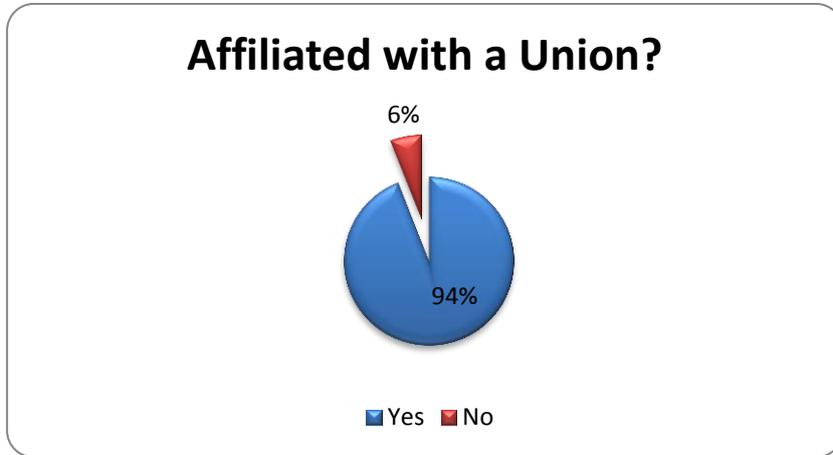


**FIGURE 3-6: PERIOD OF EMPLOYMENT IN CURRENT POSITION**

Figure 3-6 displays the respondents' year of employment in their current positions. 26% of respondents enjoys more than 30years in their current positions. 31% has experience of between 20 and 30 years in their current position and 17% acquires experience of less than 10years.

### 3.8.1.7 Respondents' union affiliation

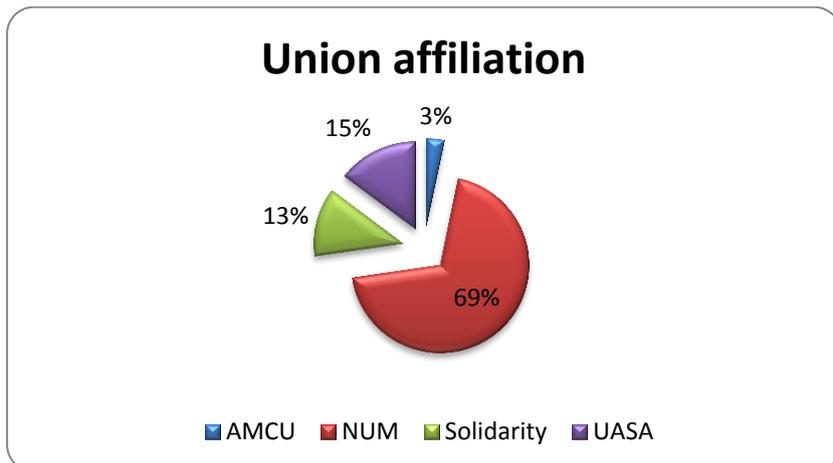
The respondents were requested to indicate if they belong to a union. Figure 3-7 below depicts the answers given:



**FIGURE 3-7: UNION AFFILIATION**

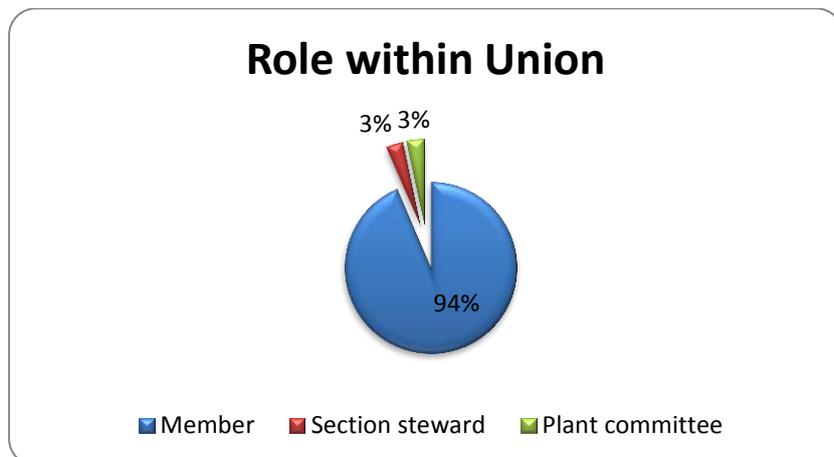
94% of respondents do indeed belong to an organised labour union.

From the 94% who are affiliated with a union, the majority (69.5%) are NUM (National Union of Mineworkers) members, while 14.7% is associated with UASA (United Association of South Africa), 12.6% is Solidarity members and only 3.2% is associated with AMCU (Association of Mineworkers and Construction Union). These numbers are displayed in figure 3-8 below:



**FIGURE 3-8: UNION AFFILIATION**

Respondents were also requested to indicate which roles they play within the union. Figure 3-9 below displays the outcome:



**FIGURE 3-9: UNION AFFILIATION**

From the 94% respondents who are answered that they are affiliated with a union, 94% of these respondents play the role of members, while 3.2% are section stewards and another 3.2% form part of the plant committee.

### 3.9 FREQUENCY DISTRIBUTION, MEAN AND STANDARD DEVIATION

For section C and D in the questionnaire, the respondents had to reflect their opinions on a 5-point Likert scale ranging from strongly disagree (1), disagree (2), neutral (3), agree (4), to strongly agree (5), in respect of the twenty-eight (28) questions posed to them.

Section E consisted of questions pertaining to the decision-making within the organisation on different hierarchical levels. The respondents had to reflect on their opinions by choosing the most relevant option: employees (1), organised labour (2), management (3), senior management (4), directors (5) and shareholders (6). For this section “employees” were defined verbally as “any individual employed by the organisation in the following Paterson bands: A- & B-levels and C-lower positions”. “Management” was explained verbally to the respondents as “someone in a supervisory position and above, within the plant”. “Senior management” was defined verbally to the group of respondents as “a person on E-band and above (Paterson, 2017), *id est*, a relevant manager outside the plant”. Section E also included a question where the respondents’ participation levels are measured in a range from never (1), sometimes (2), frequently (3) and always (4). The crux question of the study is also included in this section,

where the respondent is requested to rate on how he/she feels about change; *id est* “Are you generally AGAINST change?”, the respondent may choose between the following:

1. No, I embrace change,
2. No, I do not mind change,
3. Neutral,
4. Yes, I am against change, and
5. Yes, I am completely against change.

Section E again requests the respondents to reflect their opinions on the 5-point Likert scale ranging from strongly disagree (1), disagree (2), neutral (3), agree (4), to strongly agree (5), in respect of the seven (7) questions posed within the questionnaire pertaining to their perceptions on change as well as level of power. Space was left open for the respondents to write down what they would change if they were to have the opportunity to change anything.

Section F measured the respondents’ perceptions on the following groups: Non-managerial employees, Managerial employees and Senior management employees:

1. Willingness to accept and implement change,
2. Capabilities to manage and implement change, and
3. Competencies to plan, manage and implement change.

The respondents were expected to indicate once again on a Likert scale on which of these is most relevant for each group: not at all (1), not willing/capable/competent (2), neutral (3), willing/capable/competent (4) or very willing/capable/competent (5).

The frequency distributions, means ( $\bar{x}$ ) and standard deviations (s) of each question were calculated, captured and is represented below in Tables 3-2 to 3-14 below:

**TABLE 3-2: RESPONSES: PERCEIVED PERSONAL COMPETENCY LEVELS**

		Frequency & Likert scale					Mean	Std. Deviation
		Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Completely agree 5		
C10	Do you understand your roles and responsibilities toward your job?	1	0	4	28	68	4.60	0.665
C11	Do you feel competent in your job?	1	1	1	30	68	<b>4.61</b>	0.663
C12	Do you master your tasks at your job?	0	1	3	45	52	4.47	0.609
C13	Are you good at your job?	0	0	5	43	53	4.48	0.593
C14	Do you feel in control while doing your normal day-to-day tasks?	1	0	8	44	48	4.37	0.717
C15	Do you feel in control when you need to sort out a problem?	0	1	12	44	44	4.30	0.715
C16	Do you depend on others to sort out problems in your area of responsibility?	11	22	16	27	25	3.33	1.350

Table 3-2 depicts questions relating to perceived personal competency levels. Most of the respondents opted for the agree (4) and completely agree (5) options. The question “Do you feel competent in your job” had the highest mean at 4.61 and a standard deviation of 0.663, hence meaning the individuals agree with them feeling competent in their jobs. The question with the lowest mean at 3.33 was if the respondent depended on others to sort out his/her problems in his/her area of responsibility. From the statistics it would appear that the respondents do depend on others to sort out problems in their area of responsibility. This is in contrast to question C11. If a person is competent or feel competent in their job, they would not rely on any other person to sort out problems in their own area of responsibility. It would seem that most respondents did not understand question C16, or it could be due to other reasons or factors not investigated nor measured.

**TABLE 3-3: RESPONSES: JOB SATISFACTION**

		Frequency & Likert scale					Mean	Std. Deviation
		Strongly Disagree	Disagree	Neutral	Agree	Completely agree		
		1	2	3	4	5		
D17	Generally speaking, are you satisfied with your job?	2	2	13	55	29	4.06	0.822
D18	In general, are you content with the job you have?	2	2	20	46	31	4.01	0.877
D19	Do you enjoy being at work?	0	2	19	45	35	4.12	0.778
D33	Are you generally happy in the plant?	9	3	14	49	26	3.79	1.134
D34	Do you feel safe at the plant?	2	4	13	55	27	4.00	0.860

The table above displays questions relating to perceived personal competency levels. Most of the respondents opted for the agree (4) and completely agree (5) options. With 4.12 being the highest mean, it would appear that the respondents enjoy being at work. The standard deviation for this question, at 0.778, was also the lowest for this category. It is notable that more than 74% of the respondents indicated that they are happy on the plant. Although the lowest mean of 3.79 appeared for the question “Are you happy in the plant”, it still showed that the respondents are generally happy with being at their place of work. The standard deviation was relatively high for this outcome at 1.134. Nine (9) respondents, *id est* 9% of the total respondents indicated that they strongly disagreed with being happy in the plant.

**TABLE 3-4: RESPONSES: TURNOVER INTENT**

		Frequency & Likert scale					Mean	Std. Deviation
		Strongly Disagree	Disagree	Neutral	Agree	Completely agree		
		1	2	3	4	5		
D20	Do you feel that you could leave your job now?	37	29	14	14	7	2.26	1.278
D21	Are you actively looking for other jobs?	40	27	15	13	6	2.19	1.255

The questions in Table 3-4 were to measure the respondents' intentions to quit. Most of the respondents opted for the strongly disagree (1) and disagree (2) options. The means for both questions were low at 2.26 and 2.19, respectively. The respondents disagreed with feeling as if they "could leave their job now" as well as "actively looking for other jobs". By consulting Table 3-4, it appears safe to say that the respondents' intentions to quit are low.

**TABLE 3-5: RESPONSES: WORK-RELATED BASIC NEEDS SATISFACTION**

		Frequency & Likert scale					Mean	Std. Deviation
		Strongly Disagree	Disagree	Neutral	Agree	Completely agree		
		1	2	3	4	5		
D25	Do you socialize with people at your workplace?	2	12	14	47	26	3.82	1.014
D26	Are some of your colleagues close friends of yours?	9	6	19	52	15	3.57	1.099
D27	Do you often feel alone when you are at work?	27	35	18	15	6	2.39	1.200

Table 3-5 consists of questions measuring a person's work-related basic needs satisfaction. Most of the respondents opted for the agree (4) and completely agree (5) options. The highest mean, at 3.82, shows that the respondents agree with the fact that they socialise with people at the workplace. This question's standard deviation was 1.014. Question 27 was a reversed question and also showed positive results in that respondents' work-related basic needs are being satisfied at this operation. Thus, it would seem from the above table that employees at this operation are satisfied in terms of work-related basic needs.

**TABLE 3-6: RESPONSES: AFFECTIVE COMMITMENT**

		Frequency & Likert scale					Mean	Std. Deviation
		Strongly Disagree	Disagree	Neutral	Agree	Completely agree		
		1	2	3	4	5		
D22	Do you feel part of a team at work?	3	2	13	55	28	4.02	0.872
D23	Do you feel part of a family at work?	4	11	21	48	17	3.62	1.018
D24	Do you feel a 'sense of belonging' towards your organisation?	5	9	21	43	23	3.69	1.075
D28	Do you feel that your organisation's challenges are your own?	11	21	24	31	14	3.16	1.223
D29	Do you enjoy discussing your organisation with other people (non-	10	17	25	33	16	3.28	1.209
D30	Does your organisation have a great deal of personal meaning to	9	10	25	40	17	3.46	1.153
D31	Would it be hard for you to leave your organisation right now, even if you wanted to?	12	26	9	29	25	3.29	1.395
D32	Would you quit your job if you did not have another job lined up?	39	26	18	16	3	2.20	1.200
D35	Is the reason for you being at your organisation due to financial constraints/obligations?	1	5	22	55	18	3.83	0.813
D36	Is the reason for you being at your organisation due to desire? (You want to be at your organisation?)	3	3	20	56	19	3.84	0.869
D37	Is the reason for you being at your organisation due to convenience for you?	1	10	23	57	10	3.64	0.832

Table 3-6 above exhibits the statistics rendered from requesting answers from the respondents with regard to their affective commitment towards their organisation. Most of the respondents

opted for the agree (4) and completely agree (5) options. The highest mean for this category was calculated where the respondents mostly agreed and completely agreed with the fact that they ‘feel part of a team at work’. The standard deviation for this question was the third lowest, at 0.872. The lowest mean for this set of questions was question D32, in that the respondents disagreed with quitting their jobs without having an alternative lined up. The standard deviation for this question was relatively high at 1.2 (fourth highest of this table). The respondents were convinced that the reasons for them being at their organisation were due to financial constraints, convenience for them as well as desire.

**TABLE 3-7: RESPONSES: PERCEIVED LEVEL OF POWER**

		Frequencies						Mean	Std. Deviation
		Employees	Organised labour	Management	Senior Management	Directors	Shareholders		
		1	2	3	4	5	6		
D38	Who, in your opinion, have the MOST say when making decisions which would influence the processes on the plant?	10	30	45	13	2	1	2.703	0.954
D39	Who, in your opinion, have the LEAST say when making decisions which would influence the processes on the plant?	73	6	16	2	1	3	1.624	1.182
D40	Who, in your opinion, have the MOST say when making decisions regarding strategies, finances, etc. on the plant?	0	3	57	36	2	3	3.455	0.728
D41	Who, in your opinion, have the LEAST say when making decisions regarding strategies, finances, etc. on the plant?	70	2	16	12	0	1	1.743	1.197
D42	Who, in your opinion, have the MOST say when making decisions in your organisation for your organisation?	0	4	16	21	38	22	4.574	1.117
D43	Who, in your opinion, have the LEAST say when making decisions in your organisation for your organisation?	74	5	11	6	4	1	1.653	1.220

From Table 3-7, it is clear that the respondents perceive that management on plant level have the most say pertaining to decisions made which would influence the processes on the plant ( $\bar{x} = 2.703$ ,  $s = 0.954$ ), while it was perceived that employees have the least say ( $\bar{x} = 1.624$ ,  $s = 1.182$ ). In terms of the decisions being made, on plant level, regarding strategies being followed and financials, it is perceived that again management seems to have the most say ( $\bar{x} = 3.455$ ,  $s = 0.728$ ), while it is perceived that employees have the least say yet again ( $\bar{x} = 1.743$ ,  $s = 1.197$ ). When it comes to decisions for the greater company, it is perceived by the respondents that the directors of the company have the most say ( $\bar{x} = 4.574$ ,  $s = 1.117$ ), while again, employees have the least say ( $\bar{x} = 1.653$ ,  $s = 1.220$ ). It should be noted that 30% of the respondents perceives that organised labour has the most say when it comes to plant processes, this could be reflective of the fact that most of the workforce is unionised.

**TABLE 3-8: RESPONSES: EMPLOYEE INVOLVEMENT**

		Frequency & Likert scale				Mean	Std. Deviation
		Never	Sometimes	Frequently	Always		
		1	2	3	4		
E44	Do you have any input on revising processes, procedures and/or policies?	35	44	15	7	1.94	0.881

Question E44, which is shown in table 3-8, measured the respondents' level of involvement in revising processes, procedures and/or policies. The output of the statistical analysis was that employees were only sometimes part of revising processes, procedures and/or policies. Two more questions were included in measuring employee participation levels. Table 3-9 shows the highest mean being 2.72, where the respondents feel neutral about if they "have influence on any transformation/change that takes place" in their workplace. The standard deviation for this question was a high 1.258. The respondents felt that they somewhat disagreed with the fact that they do "have input on any decisions made" within their organisation.

**TABLE 3-9: RESPONSES: EMPLOYEE INVOLVEMENT**

		Frequency & Likert scale					Mean	Std. Deviation
		Strongly Disagree	Disagree	Neutral	Agree	Completely agree		
		1	2	3	4	5		
E46	Do you feel that you have influence on any transformation/change that takes place in your workplace?	23	21	25	25	7	2.72	1.258
E47	Do you have input on any decisions made within your organisation?	38	21	28	12	2	2.20	1.132

Table 3-9 above shows the statistics rendered when the perception of level of employee influence was evaluated. Most of the respondents opted for the strongly disagree (1) and disagree (2) options, which demonstrates that they do not perceive that their input is considered in the organisation's decision-making processes. More than 58% disagreed that they do not have input on the organisation's decisions, while only 14% agreed and completely agreed to having input. The highest mean of 2.72, indicated that the respondents felt more neutral about if they perceived that they have any influence on any changes which take place in their workplace.

**TABLE 3-10: RESPONSES: FOR OR AGAINST CHANGE?**

		Frequency & Likert scale					Mean	Std. Deviation
		Embrace change	Do not mind change	Neutral	Against change	Completely against change		
		1	2	3	4	5		
E45	Are you, generally AGAINST change?	25	17	11	27	21	3.02	1.510

Table 3-10 above presents the statistics rendered from asking the respondents their opinion about change, *id est*, "are you generally against change?". Most of the respondents opted for the against change (4) and completely against change (5) options which indicates that they do in fact are not in favour of change. However, the mean of 3.02, rather suggests that the respondents are more neutral towards change than against change. This could be attributed to the 'against change' category having the highest percentage at 27%, while, at a close second,

the 'embrace change' category having a score of 25%. The standard deviation, on the other hand, is very high, at 1.510.

**TABLE 3-11: RESPONSES: PERSONAL PERCEPTION ABOUT CHANGE**

		Frequency & Likert scale					Mean	Std. Deviation
		Strongly Disagree	Disagree	Neutral	Agree	Completely agree		
		1	2	3	4	5		
E48	Does change make you feel uncertain?	7	18	17	40	19	3.46	1.188
E49	Does the idea of change make you feel negative about it?	15	14	28	30	14	3.14	1.257
E50	Do you feel that your job is threatened when change is brought about in the workplace?	11	13	21	42	14	3.35	1.195
E51	Do you feel that you will lose more than you will gain, when change is applied?	12	13	26	31	19	3.32	1.256
E52	Do you believe that change is currently needed within your organisation?	8	1	15	40	37	3.96	1.131

Table 3-11 above shows the statistics rendered subjecting the respondents to questions on how they "feel" about change, in general. Most of the respondents opted for the agree (4) and completely agree (5) options, which demonstrates that change make them feel uncertain, negative about change, that their job is being threatened and make them feel as if they will lose more than what they will gain. They also indicated that they agree and completely agree that change is needed within their organisation. This question also rendered the highest mean at 3.96 as well as the lowest standard deviation in this set of questions. The lowest mean of 3.14, indicated that the respondents felt more neutral about if they perceived change as being negative. This question had the highest mean in this set of questions.

**TABLE 3-12: RESPONSES: CHANGE READINESS – WILLINGNESS**

		Frequency & Likert scale					Mean	Std. Deviation
		Not at all willing	Not willing	Neutral	Willing	Very willing		
		1	2	3	4	5		
F54(i)	Are non-managerial employees willing to accept and implement change?	19	27	27	19	9	2.72	1.226
F54(ii)	Are management employees willing to accept and implement change?	5	10	25	50	11	3.51	0.986
F54(iii)	Are senior management employees willing to accept and implement change?	5	12	19	37	28	3.70	1.145

For the willingness' outputs, it is noted that, with the highest mean at 3.7, senior management is perceived to be the most willing to accept and implement change. The standard deviation, however, was relatively higher than the lowest, at 1.145. It is clear that the respondents perceive the non-managerial employees as being less willing than management and senior management. The mean was the lowest at 2.72 and the standard deviation was the highest at 1.226.

**TABLE 3-13: RESPONSES: CHANGE READINESS – CAPABILITY**

		Frequency & Likert scale					Mean	Std. Deviation
		Not at all capable	Not capable	Neutral	capable	Extremely capable		
		1	2	3	4	5		
F55(i)	Are non-managerial employees capable to manage and implement change?	19	25	26	21	10	2.78	1.254
F55(ii)	Are management employees capable to manage and implement change?	4	12	30	42	13	3.48	0.996
F55(iii)	Are senior management employees capable to manage and implement change?	4	14	20	32	31	3.72	1.176

In terms of how capable each group is perceived to be, senior management once again was perceived to be the most capable with a mean of 3.72 and a standard deviation, once again slightly higher than the lowest, at 1.176. The non-managerial employees were again perceived as being the least capable, with the lowest mean of 2.78 and the lowest standard deviation of 1.254.

**TABLE 3-14: RESPONSES: CHANGE READINESS – COMPETENCY**

		Frequency & Likert scale					Mean	Std. Deviation
		Not at all competent	Not competent	Neutral	competent	Extremely competent		
		1	2	3	4	5		
F56(i)	Are non-managerial employees competent to plan, manage and implement change?	17	21	34	17	12	2.86	1.233
F56(ii)	Are management employees competent to plan, manage and implement change?	2	9	23	54	13	3.66	0.886
F56(iii)	Are senior management employees competent to plan, manage and implement change?	2	12	20	37	30	3.80	1.058

Senior management was for the category “competent to plan, manage and implement change”, perceived to be the most competent with a mean of 3.8 and a standard deviation again slightly higher than that of the lowest. Management achieved a mean of 3.66 and a standard deviation of 0.886, while the non-managerial employees were perceived as being less competent than the other two groups. They had the lowest mean of 2.86 and the highest standard deviation at 1.233.

### 3.10 RELIABILITY OF THE QUESTIONNAIRE

Reliability correlates with the credibility of the findings of the survey and is concerned with the research findings. Thus, for the sake of internal consistency, reliability and credibility between the questions in each factor/construct in the questionnaire, Cronbach Alpha coefficients were calculated. According to Welman *et al.* (2005), a high internal consistency hints a high generalisability across the questions in the questionnaire. Thus, it is suggested that the

calculated Cronbach Alpha coefficient should be in excess of or equal to 0.7 (Nunnally & Bernstein, 1994), however, Cortina cited by Field (2009) suggested that a Cronbach Alpha of above 0.57 is still acceptable.

Table 3-15, below illustrates the calculated mean, standard deviation and Cronbach Alpha coefficient of each of the constructs measuring the factors influencing people's reaction towards change.

**TABLE 3-15: INTERNAL CONSISTENCY AS PER CRONBACH ALPHA COEFFICIENTS**

Internal consistency				
		Cronbach Alpha	Mean	Standard Deviation
1	Personal competency	0.822*	4.470	0.482
2	Job satisfaction	0.681	3.996	0.599
3	Intent to quit	0.565	3.777	1.057
4	Affective commitment	0.713	3.335	0.547
5	Work satisfaction	0.796	3.670	0.933
6	Perceived level of power	0.732	2.460	1.062
7	Perception_ of change	0.777	3.444	0.877
8	Perception of change 2**	0.778	3.373	0.869
9	Change readiness_nonM	0.838	2.789	1.076
10	Change readiness_Man	0.876	3.551	0.857
11	Change readiness_SenMan	0.895	3.743	1.025

*\*As indicated before in section 3.9, it would appear as if most of the respondents did not understand question C16. When question C16 was still part of the personal competency category, the Cronbach Alpha calculated to 0.576. C16 was therefore discarded and ignored when the Cronbach Alpha was calculated for Personal competency.*

*\*\*Perception of change 2 relates to all questions concerned with the respondents' perception on change, id est, questions 48 to 52 as well as the inclusion of question 45, id est, "Are you against change?"...which is also a question pertaining on how they 'feel' about change in general.*

*The construct, perception of change only included questions 48 to 52.*

The twelfth factor was not included in this, as it was only made up of one question, but as can be seen in the Perception of change 2 factor, the twelfth factor's inclusion in that category increases the Cronbach Alpha.

Table 3-15 above draws evidence that the internal consistency of the questionnaire is credible, as all coefficients were found to be well above 0.5, therefore it can be concluded that the measuring instrument used was reliable.

Factors 1 – 8's Likert scale ranged from strongly disagree (1), disagree (2), neutral (3), agree (4) to completely agree (5). From table 3-15, personal competency had the highest mean at 4.47 and a standard deviation of 0.482, which indicates that respondents agreed to completely agree to feeling competent in their respective jobs. With means close to 4, job satisfaction ( $\bar{x} = 3.996$ ,  $s = 0.599$ ), intention to quit ( $\bar{x} = 3.777$ ,  $s = 1.057$ ) and work-related basic need satisfaction ( $\bar{x} = 3.67$ ,  $s = 0.933$ ) indicated that the respondents agreed that they are satisfied with their jobs and work-related basic needs as well as that they do not intend on quitting any time soon. The construct with the lowest mean, at 2.46 and a standard deviation equal to 1.062, was the perceived level of power. In particular, the respondents did not feel that they have influence on any decisions made within the organisation. In addition, union representation is high, and processes in the plant are also high. Mining tends to be autocratic, thus it is to be expected that the employees would feel this way.

Factors 9 – 11 measured the willingness, capability and competency of the non-managerial, management- and senior management-employees in managing and implementing change. The three criteria in which change readiness was measured were willingness, capability and competency:

1. Is the specific group perceived to be willing to accept and implement change?
2. Is the specific group perceived to be capable of managing and implementing change?
3. Is the specific group perceived to be competent to plan, manage and implement change?

The Likert scale ranged from not at all (1), not willing/able/competent (2), neutral (3), willing/able/competent (4) to very willing/extremely able/extremely competent (5). From the table above, it is seen that, with a mean of 3.743 and a standard deviation of 1.025, senior management employees were perceived as being the most ready for change. The respondents also agreed that managerial employees were also to ready for change ( $\bar{x} = 3.551$ ,  $s = 0.857$ ). The non-managerial group were ranked below neutral, thus indicating that the respondents felt that the non-managerial respondents were not quite ready, in terms of willingness, capability and competency, for change.

### 3.11 RESULTS OF THE ANALYSIS ON DEMOGRAPHIC INFORMATION AND CONSTRUCTS

Independent *t*-tests were used to check for differences in the means, as well as ANOVA tests where more than two variables applied.

As per Ellis and Steyn (2003), any *p*-value below 0.05 indicates adequate proof that the result is statistically significant. This is, however, most relevant for random sampling. Seeing that this study was based on convenience sampling and not random sampling as per Ellis and Steyn's (2003) warning, the *p*-values will not be interpreted, but rather only displayed for the sake of completeness.

Nevertheless, Cohen's guidelines (1988) will be used in order to interpret the effect-sizes (*d*-values):

- small effect:  $d = 0.2$ ,
- medium effect:  $d = 0.5$ , and
- large effect:  $d = 0.8$

#### 3.11.1 Independent *t*-tests

The results for the independent two-sample *t*-tests are displayed in Tables 3-16 to 3-18 below.

3.11.1.1 Independent *t*-tests: Differences between the factors in terms of gender

TABLE 3-16: GENDER – FACTOR DIFFERENCES

Gender		N	Mean	Std. Deviation	<i>p</i> -value	<i>d</i> -value
Are you generally AGAINST change?	Male	88	3.034	1.542	0.785	0.072
	Female	13	2.923	1.320		
Personal_competency	Male	88	4.489	0.484	0.319	0.294
	Female	13	4.346	0.464		
Job_satisfaction	Male	88	4.002	0.603	0.786	0.080
	Female	13	3.954	0.590		
Intent_quit	Male	88	3.835	1.066	0.131	0.423
	Female	13	3.385	0.939		
Affective_commitment	Male	88	3.327	0.557	0.706	0.103
	Female	13	3.385	0.493		
Work_satisfaction	Male	88	3.769	0.872	0.029	0.706
	Female	13	3.000	1.089		
Perceived_Power	Male	88	2.517	1.087	0.099	0.405
	Female	13	2.077	0.813		
Perception_Change	Male	88	3.475	0.901	0.264	0.271
	Female	13	3.231	0.682		
Perception_Change2	Male	88	3.402	0.900	0.267	0.247
	Female	13	3.179	0.610		
Ready_Change_nonM	Male	88	2.826	1.110	0.267	0.259
	Female	13	2.538	0.800		
Ready_Change_Man	Male	88	3.606	0.824	0.169	0.420
	Female	13	3.179	1.015		
Ready_Change_SenMan	Male	88	3.803	0.989	0.202	0.388
	Female	13	3.333	1.210		

As can be seen from the table above, Work-related basic need satisfaction, with a *d*-value of 0.706, has a medium effect on this survey. Males were inclined to agree more to the questions asked ( $\bar{x} = 3.769$ ), than the females, as the females indicated a neutral mind-set to the questions asked ( $\bar{x} = 3.000$ ). It would also seem that the males were surer of their selections as their standard deviation was smaller ( $s = 0.872$ ).

Personal competency levels (*d*-value = 0.294), intention to quit (*d*-value = 0.423), perceived power levels (*d*-value = 0.405), perception towards change, with and without the primary question of the survey (*d*-values 0.247 and 0.271, respectively), and change readiness for all three groups have small effects.

3.11.1.2 Independent *t*-tests: Differences between the factors in terms of race

TABLE 3-17: RACE – FACTOR DIFFERENCES

Race		N	Mean	Std. Deviation	<i>p</i> -value	<i>d</i> -value
Are you generally AGAINST change?	White	30	2.833	1.117	0.348	0.164
	Black African	67	3.104	1.653		
Personal_competency	White	30	4.517	0.414	0.518	0.124
	Black African	67	4.453	0.516		
Job_satisfaction	White	30	3.960	0.646	0.694	0.085
	Black African	67	4.015	0.596		
Intent_quit	White	30	3.583	1.123	0.174	0.291
	Black African	67	3.910	0.977		
Affective_commitment	White	30	3.409	0.554	0.357	0.203
	Black African	67	3.296	0.558		
Work_satisfaction	White	30	3.033	0.976	0.000	0.919
	Black African	67	3.930	0.790		
Perceived_Power	White	30	2.483	0.866	0.811	0.045
	Black African	67	2.433	1.131		
Perception_Change	White	30	3.267	0.785	0.161	0.280
	Black African	67	3.525	0.924		
Perception_Change2	White	30	3.194	0.709	0.135	0.279
	Black African	67	3.455	0.934		
Ready_Change_nonM	White	30	2.656	0.823	0.355	0.163
	Black African	67	2.851	1.198		
Ready_Change_Man	White	30	3.456	0.697	0.534	0.114
	Black African	67	3.562	0.932		
Ready_Change_SenMan	White	30	3.689	0.816	0.816	0.042
	Black African	67	3.736	1.126		

As can be seen from the table above, work-related basic need satisfaction, with a *d*-value of 0.919, has a high effect on this survey. Respondents who are from the Black African ethnic group tend to agree more to the questions asked ( $\bar{x} = 3.930$ ), than the respondents from the White ethnic group, as the White group indicated a neutral mind-set to the questions asked ( $\bar{x} = 3.033$ ). It would also appear that the respondents from the Black African group were more certain of their selections as their standard deviation, at 0.790, was smaller.

The following factors had a small effect: Intention to quit (*d*-value = 0.291), affective commitment (*d*-value = 0.203) and the respondents' perception towards change, with and without the primary question of the survey (*d*-values 0.279 and 0.280, respectively).

### 3.11.1.3 Independent *t*-tests: Differences between the factors in terms of union membership

**TABLE 3-18: UNION MEMBERSHIP – FACTOR DIFFERENCES**

<b>Member of a union?</b>		<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b><i>p</i>-value</b>	<b><i>d</i>-value</b>
Are you generally AGAINST change?	Yes	95	3.021	1.544	0.959	0.014
	No	6	3.000	0.894		
Personal_competency	Yes	95	4.477	0.485	0.557	0.239
	No	6	4.361	0.440		
Job_satisfaction	Yes	95	4.011	0.602	0.319	0.405
	No	6	3.767	0.528		
Intent_quit	Yes	95	3.811	1.075	0.048	0.522
	No	6	3.250	0.524		
Affective_commitment	Yes	95	3.342	0.558	0.447	0.205
	No	6	3.227	0.319		
Work_satisfaction	Yes	95	3.698	0.940	0.174	0.506
	No	6	3.222	0.720		
Perceived_Power	Yes	95	2.442	1.081	0.344	0.285
	No	6	2.750	0.689		
Perception_Change	Yes	95	3.469	0.889	0.120	0.491
	No	6	3.033	0.557		
Perception_Change2	Yes	95	3.395	0.886	0.114	0.414
	No	6	3.028	0.452		
Ready_Change_nonM	Yes	95	2.828	1.085	0.077	0.610
	No	6	2.167	0.723		
Ready_Change_Man	Yes	95	3.554	0.876	0.816	0.062
	No	6	3.500	0.506		
Ready_Change_SenMan	Yes	95	3.733	1.038	0.687	0.150
	No	6	3.889	0.861		

Table 3-18 exerts the following, the intention to quit, work-related basic need satisfaction and change readiness for non-managerial employees, with *d*-values of 0.522, 0.506 and 0.610, respectively, have a medium effect on this survey. Respondents who are not members of a union seemed more sure of their selections in all three constructs, as their standard deviations were lower than that of the respondents who are affiliated with a union  $s = 0.524, 0.720$  and  $0.723$ , respectively. For the intention to quit, the union members tend to agree with not intending to quit, while the non-union members were more neutral in their selections. In terms of the work-related basic need satisfaction, the union members tend to agree with being satisfied with work-

related needs, while the non-union members were more neutral in their selections. In terms of the non-managerial employees' change readiness, the respondents who are part of a union felt neutral about the non-managerial employees' change readiness, while the respondents who do not belong to a union felt that the non-managerial employees were not ready for change.

The following factors had a small effect: Personal competency ( $d$ -value = 0.239), affective commitment ( $d$ -value = 0.205) and the perceived level of power ( $d$ -value = 0.285).

### **3.11.2 ANOVA tests**

ANOVA tests were conducted to measure the differences between the twelve constructs, *id est* factors which could impact on individual's reaction to change, with regards to demographic information which consisted of more than two variables. The results of these tests can be seen in Tables 3-19 to 3-21 and 3-23.

### 3.11.2.1 Independent ANOVA tests: Differences between the factors in terms of union affiliation

**TABLE 3-19: UNION AFFILIATION – FACTOR DIFFERENCES**

Union Affiliation		N	Mean	Std. Deviation	p-value	NUM with (d-value)	Solidarity with (d-value)
Are you generally AGAINST change?	NUM	66	3.152	1.666	0.408		
	Solidarity	12	2.500	1.314		0.391	
	UASA	14	3.000	1.038		0.091	0.380
Personal_competency	NUM	66	4.444	0.507	0.723		
	Solidarity	12	4.486	0.479		0.082	
	UASA	14	4.560	0.427		0.227	0.153
Job_satisfaction	NUM	66	3.994	0.576	0.819		
	Solidarity	12	4.100	0.652		0.163	
	UASA	14	3.957	0.715		0.051	0.200
Intent_quit	NUM	66	3.864	1.047	0.399		
	Solidarity	12	3.958	1.097		0.086	
	UASA	14	3.464	1.151		0.347	0.429
Affective_commitment	NUM	66	3.302	0.557	0.268		
	Solidarity	12	3.591	0.529		0.519	
	UASA	14	3.344	0.620		0.069	0.398
Work_satisfaction	NUM	66	3.929	0.724	0.000		
	Solidarity	12	3.194	1.202		0.612	
	UASA	14	2.905	1.105		0.927	0.241
Perceived_Power	NUM	66	2.386	1.116	0.928		
	Solidarity	12	2.500	0.879		0.102	
	UASA	14	2.464	1.028		0.070	0.035
Perception_Change	NUM	66	3.536	0.937	0.349		
	Solidarity	12	3.133	0.778		0.430	
	UASA	14	3.400	0.784		0.146	0.340
Perception_Change2	NUM	66	3.472	0.948	0.278		
	Solidarity	12	3.028	0.735		0.469	
	UASA	14	3.333	0.695		0.146	0.416
Ready_Change_nonM	NUM	66	2.879	1.151	0.455		
	Solidarity	12	2.778	0.808		0.088	
	UASA	14	2.476	0.958		0.350	0.315
Ready_Change_Man	NUM	66	3.652	0.794	0.348		
	Solidarity	12	3.278	1.013		0.369	
	UASA	14	3.571	0.733		0.101	0.290
Ready_Change_SenMan	NUM	66	3.833	1.005	0.559		
	Solidarity	12	3.500	1.115		0.299	
	UASA	14	3.738	0.797		0.095	0.214

AMCU respondent omitted

The following can be noted in Table 3-19:

Only one (1) respondent indicated that they were a member of AMCU. The AMCU respondent was omitted from the analyses.

For the construct, Work-related basic needs satisfaction, a  $d$ -value of 0.927 (large effect size) was calculated when respondents, who are affiliated with NUM, were compared to respondents who are affiliated with UASA. The mean values for the referred to comparison were 3.929 and 2.905, respectively. The respondents affiliated with NUM agreed with that their jobs satisfy their basic work-related needs, while the respondents who are affiliated with UASA indicated that they had a more neutral mind-set towards this topic.

For the same construct it was found that comparing NUM member respondents with Solidarity member respondents reflected a medium effect, as the  $d$ -value was found to be 0.612. The respective mean values for the referred to comparison were 3.929 and 3.194. Again, the respondents affiliated with NUM agreed with that their jobs satisfy their basic work-related needs, while the respondents who are affiliated with Solidarity, as with UASA, indicated that they had a more neutral mind-set towards this topic. UASA's mean was the lowest, though.

Affective commitment also indicated a medium effect, according to table 3-19, when the respondents from Solidarity were compared with the respondents from NUM, with a  $d$ -value of 0.519. The mean values for the referred to comparison were 3.591 and 3.302, respectively. The respondents affiliated with Solidarity agreed with that they felt more affectively committed to the organisation, while the respondents who are affiliated with NUM indicated that they were more neutral inclined to being affectively committed to the organisation.

### 3.11.2.2 Independent ANOVA tests: Differences between the factors in terms of highest qualification obtained

TABLE 3-20: HIGHEST QUALIFICATION OBTAINED – FACTOR DIFFERENCES

Highest Qualification obtained		N	Mean	Std. Deviation	p-value	> Matric with (d-value)	Matric with (d-value)	Trade certificate with (d-value)
Are you generally AGAINST change?	Less than Matric	42	3.000	1.608	0.077			
	Matric	29	3.517	1.326		0.322		
	Trade certificate	16	2.813	1.682		0.111	0.419	
	Diploma	14	2.286	1.069		0.444	0.929	0.313
Personal competency	Less than Matric	42	4.444	0.446	0.193			
	Matric	29	4.506	0.457		0.134		
	Trade certificate	16	4.646	0.632		0.319	0.222	
	Diploma	14	4.274	0.401		0.383	0.507	0.589
Job_satisfaction	Less than Matric	42	4.114	0.648	0.112			
	Matric	29	3.890	0.611		0.347		
	Trade certificate	16	4.113	0.444		0.003	0.365	
	Diploma	14	3.729	0.487		0.595	0.264	0.788
Intent_quit	Less than Matric	42	3.976	1.053	0.035			
	Matric	29	3.828	0.816		0.141		
	Trade certificate	16	3.813	1.263		0.130	0.012	
	Diploma	14	3.036	1.046		0.893	0.757	0.615
Affective commitment	Less than Matric	42	3.413	0.544	0.364			
	Matric	29	3.229	0.603		0.306		
	Trade certificate	16	3.432	0.563		0.033	0.337	
	Diploma	14	3.208	0.380		0.378	0.035	0.398
Work_satisfaction	Less than Matric	42	3.944	0.732	0.011			
	Matric	29	3.552	0.997		0.394		
	Trade certificate	16	3.729	1.049		0.205	0.169	
	Diploma	14	3.024	0.929		0.991	0.529	0.673
Perceived_Power	Less than Matric	42	2.643	1.201	0.505			
	Matric	29	2.362	0.963		0.234		
	Trade certificate	16	2.219	0.894		0.353	0.149	
	Diploma	14	2.393	1.003		0.208	0.031	0.174
Perception_Change	Less than Matric	42	3.586	0.909	0.444			
	Matric	29	3.400	0.854		0.204		
	Trade certificate	16	3.400	1.066		0.174	0.000	
	Diploma	14	3.157	0.515		0.472	0.285	0.228
Perception_Change2	Less than Matric	42	3.488	0.907	0.345			
	Matric	29	3.420	0.818		0.076		
	Trade certificate	16	3.302	1.087		0.171	0.108	
	Diploma	14	3.012	0.460		0.525	0.498	0.267
Ready_Change_nonM	Less than Matric	42	3.294	1.119	0.000			
	Matric	29	2.287	0.979		0.899		
	Trade certificate	16	2.563	0.867		0.653	0.281	
	Diploma	14	2.571	0.721		0.645	0.290	0.010
Ready_Change_Man	Less than Matric	42	3.548	0.792	0.552			
	Matric	29	3.644	0.976		0.098		
	Trade certificate	16	3.646	0.954		0.103	0.002	
	Diploma	14	3.262	0.669		0.361	0.391	0.402
Ready_Change_SenMan	Less than Matric	42	3.627	0.969	0.567			
	Matric	29	3.920	1.160		0.252		
	Trade certificate	16	3.875	0.973		0.255	0.038	
	Diploma	14	3.571	0.982		0.057	0.300	0.309

B-degree & Honours/Post grad respondents omitted

Table 3-20 exerts the following results:

The construct, work-related basic needs satisfaction, rendered the highest  $d$ -value for highest qualification obtained when the respondents who have a qualification less than Matric were compared to respondents with a diploma ( $d = 0.991$ ), this indicates that the effect is large. The means of the mentioned comparison were 3.944 and 3.024, respectively. The respondents who possess less than Matric were inclined to agree that their work-related basic needs are being met, while the diplomats indicated that they were neutral with regards to this statement. The respondents with less than Matric, through their standard deviation of 0.732, showed that they were more-sure of their answers for this construct than the respondents with diplomas ( $s = 0.929$ ).

A  $d$ -value of 0.929 (large effect size) was obtained when the respondents with Matric were compared to the respondents with a diploma for the construct if the respondents were against change, in general. The means of the mentioned comparison were 3.517 and 2.286, respectively. The respondents who possess a Matric qualification were inclined to agree that they are generally against change; while the respondents who have a diploma indicated that they disagreed with the statement. The respondents with diplomas, through their standard deviation of 1.069, displayed more surety of their answers for this construct than the respondents with Matric ( $s = 1.326$ ).

Another large effect construct which showed a  $d$ -value of 0.899, was change readiness for non-managerial employees, which was obtained when the respondents with and without a Matric qualification were compared. The means of the mentioned comparison were 2.287 and 3.294, respectively. The respondents who do not possess a Matric qualification were towards being neutral that the non-managerial employees are ready for change, while the respondents with Matric disagreed with the non-managerial employees being change ready. The respondents with Matric, through their standard deviation of 0.979, displayed more surety of their answers for this construct than the respondents with less than Matric ( $s = 1.119$ ).

The last construct which scored a large effect size figure was the intention to quit, where the respondents with less than Matric were compared with those with a diploma ( $d = 0.893$ ). The means of the mentioned comparison were 3.976 and 3.036, respectively. The respondents who have less than a Matric qualification agreed that they have no intention of quitting, while the respondents with Matric were neutral on the question. Both groups were equally sure of their choices as they both had standard deviations close to 1.05.

### 3.11.2.3 Independent ANOVA tests: Differences between the factors in terms of work level

**TABLE 3-21: PATERSON GRADE (PATERSON GRADING, 2017) – FACTOR DIFFERENCES**

Paterson grade		N	Mean	Std. Deviation	p-value	A-level with (d-value)	B-level with (d-value)	C-lower with (d-value)
Are you generally AGAINST change?	A-level	18	3.722	1.565	0.003			
	B-level	40	3.350	1.424		0.238		
	C-lower	20	2.650	1.663		0.645	0.421	
	C-upper	21	2.190	1.078		0.979	0.814	0.276
Personal_competency	A-level	18	4.519	0.342	0.390			
	B-level	40	4.400	0.505		0.235		
	C-lower	20	4.617	0.600		0.164	0.361	
	C-upper	21	4.421	0.430		0.228	0.041	0.327
Job_satisfaction	A-level	18	4.100	0.435	0.572			
	B-level	40	4.005	0.657		0.145		
	C-lower	20	4.060	0.411		0.092	0.084	
	C-upper	21	3.848	0.764		0.330	0.206	0.278
Intent_quit	A-level	18	3.833	1.057	0.418			
	B-level	40	3.963	0.858		0.122		
	C-lower	20	3.675	1.340		0.118	0.214	
	C-upper	21	3.500	1.140		0.292	0.406	0.131
Affective_commitment	A-level	18	3.182	0.592	0.548			
	B-level	40	3.407	0.551		0.380		
	C-lower	20	3.305	0.500		0.207	0.186	
	C-upper	21	3.351	0.569		0.285	0.099	0.081
Work_satisfaction	A-level	18	4.037	0.675	0.333			
	B-level	40	3.667	1.029		0.360		
	C-lower	20	3.633	0.979		0.412	0.032	
	C-upper	21	3.508	0.834		0.634	0.154	0.128
Perceived_Power	A-level	18	2.167	1.317	0.417			
	B-level	40	2.625	1.073		0.348		
	C-lower	20	2.475	0.866		0.234	0.140	
	C-upper	21	2.286	0.969		0.090	0.316	0.195
Perception_Change	A-level	18	3.578	1.152	0.406			
	B-level	40	3.545	0.791		0.028		
	C-lower	20	3.420	1.036		0.137	0.121	
	C-upper	21	3.171	0.598		0.353	0.472	0.240
Perception_Change2	A-level	18	3.602	1.094	0.108			
	B-level	40	3.513	0.777		0.082		
	C-lower	20	3.292	1.043		0.284	0.212	
	C-upper	21	3.008	0.556		0.543	0.650	0.272
Ready_Change_nonM	A-level	18	3.000	1.358	0.456			
	B-level	40	2.908	1.208		0.068		
	C-lower	20	2.617	0.804		0.282	0.241	
	C-upper	21	2.556	0.770		0.327	0.292	0.076
Ready_Change_Man	A-level	18	3.741	0.933	0.595			
	B-level	40	3.600	0.807		0.151		
	C-lower	20	3.400	1.142		0.298	0.175	
	C-upper	21	3.444	0.590		0.318	0.193	0.039
Ready_Change_SenMan	A-level	18	3.852	1.024	0.913			
	B-level	40	3.708	1.038		0.138		
	C-lower	20	3.650	1.273		0.159	0.046	
	C-upper	21	3.825	0.827		0.026	0.113	0.138

*D-upper respondents omitted*

Table 3-21 shows the following two large effect sizes for this construct:

The largest effect size with a  $d$ -value of 0.979 was obtained when the respondents employed at an A-level work grade were compared to the respondents in C-upper positions for the construct if the respondents were against change, in general. The means of the mentioned comparison are 3.722 and 2.190, respectively. The respondents who have A-level positions within the organisation were inclined to agree that they are generally against change, while the respondents who are in C-upper positions indicated that they generally disagreed with the statement. The C-upper respondents, through their standard deviation of 1.078, displayed more surety of their answers for this construct than the respondents in A-level positions ( $s = 1.565$ ).

The second-largest effect size with a  $d$ -value of 0.814 was obtained when the respondents employed at a B-level work grade were also compared with the respondents in C-upper positions for the construct if the respondents were against change. The means of the mentioned comparison are 3.350 and 2.190, respectively. The respondents who have B-level positions within the organisation displayed that they are neutral to the question posed in the questionnaire, while the respondents who are in C-upper positions indicated that they generally disagreed with the statement. The C-upper respondents, through their standard deviation of 1.078, displayed more surety of their answers for this construct than the respondents in A-level positions ( $s = 1.424$ ).

**TABLE 3-22: PATERSON GRADE (PATERSON GRADING, 2017) – FACTOR DIFFERENCES**

Level of employment	Embrace change	Do not mind change	Neutral	Against change	Completely against change
A-levels	3%	2%	0%	5%	8%
B-levels	7%	5%	4%	15%	9%
C-lower	8%	3%	1%	4%	4%
C-upper	7%	6%	5%	3%	0%
D-upper	0%	1%	1%	0%	0%

Table 3-22 shows that 41% of the A-, B- and C-lower level employees are against change, while only 28% of these same groups do not mind change.

### 3.11.2.4 Independent ANOVA tests: Differences between the factors in terms of years employed

**TABLE 3-23: YEARS OF SERVICE – FACTOR DIFFERENCES**

Years of service		N	Mean	Std. Deviation	p-value	1 - 10 with (d-value)	11 - 15 with (d-value)	16 - 25 with (d-value)	26 - 30 with (d-value)
Are you generally AGAINST change?	1 - 10	17	2.882	1.799	0.561				
	11 - 15	19	2.947	1.615		0.036			
	16 - 25	16	3.000	1.366		0.065	0.033		
	26 - 30	23	3.478	1.238		0.331	0.329	0.350	
	31 - 35	26	2.769	1.557		0.063	0.110	0.148	0.455
Personal_competency	1 - 10	17	4.608	0.306	0.089				
	11 - 15	19	4.333	0.737		0.372			
	16 - 25	16	4.708	0.276		0.329	0.509		
	26 - 30	23	4.413	0.441		0.442	0.108	0.670	
	31 - 35	26	4.385	0.431		0.517	0.070	0.750	0.065
Job_satisfaction	1 - 10	17	3.694	0.762	0.084				
	11 - 15	19	4.011	0.450		0.415			
	16 - 25	16	4.175	0.386		0.631	0.366		
	26 - 30	23	3.904	0.731		0.276	0.145	0.370	
	31 - 35	26	4.154	0.491		0.603	0.292	0.043	0.341
Intent_quit	1 - 10	17	3.412	1.202	0.654				
	11 - 15	19	3.842	1.143		0.358			
	16 - 25	16	3.813	0.655		0.333	0.026		
	26 - 30	23	3.848	1.143		0.363	0.005	0.031	
	31 - 35	26	3.885	1.042		0.393	0.037	0.069	0.032
Affective_commitment	1 - 10	17	3.080	0.590	0.218				
	11 - 15	19	3.383	0.430		0.513			
	16 - 25	16	3.398	0.479		0.538	0.031		
	26 - 30	23	3.289	0.735		0.283	0.128	0.148	
	31 - 35	26	3.469	0.397		0.658	0.199	0.148	0.245
Work_satisfaction	1 - 10	17	3.843	0.728	0.169				
	11 - 15	19	3.474	1.014		0.364			
	16 - 25	16	3.854	0.927		0.012	0.375		
	26 - 30	23	3.333	1.172		0.435	0.120	0.444	
	31 - 35	26	3.885	0.673		0.057	0.405	0.033	0.470
Perceived_Power	1 - 10	17	2.382	1.139	0.656				
	11 - 15	19	2.211	0.855		0.151			
	16 - 25	16	2.656	0.811		0.240	0.521		
	26 - 30	23	2.391	1.076		0.008	0.168	0.246	
	31 - 35	26	2.635	1.277		0.198	0.332	0.017	0.191
Perception_Change	1 - 10	17	3.553	0.862	0.586				
	11 - 15	19	3.537	0.964		0.017			
	16 - 25	16	3.175	0.923		0.409	0.375		
	26 - 30	23	3.583	0.695		0.034	0.047	0.441	
	31 - 35	26	3.346	0.951		0.217	0.198	0.180	0.249
Perception_Change2	1 - 10	17	3.441	0.878	0.573				
	11 - 15	19	3.439	0.989		0.003			
	16 - 25	16	3.146	0.827		0.336	0.296		
	26 - 30	23	3.565	0.717		0.141	0.128	0.507	
	31 - 35	26	3.250	0.932		0.205	0.191	0.112	0.338
Ready_Change_nonM	1 - 10	17	2.392	0.899	0.028				
	11 - 15	19	2.474	0.848		0.091			
	16 - 25	16	2.563	1.275		0.134	0.070		
	26 - 30	23	2.942	1.158		0.475	0.405	0.298	
	31 - 35	26	3.282	0.974		0.914	0.830	0.564	0.294
Ready_Change_Man	1 - 10	17	3.647	1.121	0.917				
	11 - 15	19	3.596	0.940		0.045			
	16 - 25	16	3.646	0.939		0.001	0.052		
	26 - 30	23	3.435	0.699		0.189	0.172	0.225	
	31 - 35	26	3.500	0.713		0.131	0.103	0.155	0.091
Ready_Change_SenMan	1 - 10	17	3.882	1.213	0.611				
	11 - 15	19	3.825	1.167		0.048			
	16 - 25	16	3.938	0.960		0.045	0.097		
	26 - 30	23	3.464	0.968		0.345	0.309	0.489	
	31 - 35	26	3.718	0.888		0.136	0.091	0.229	0.263

For the construct, change readiness of non-managerial employees, as presented in Table 3-23 above, a  $d$ -value of 0.914 (large effect size) was calculated when respondents employed between 1 and 10 years were compared to respondents employed between 31 and 35 years. The mentioned comparison obtained means of 2.392 and 3.282, respectively. From this is indicated that the respondents with between 1 and 10 years of service disagreed with non-managerial employees being ready for change, while the respondents who are employed between 31 and 35 years are neutral whether the non-managerial employees are ready for change. With standard deviations close to one another for these two groups, it seems that the respondents employed between 1 and 10 years are more certain of their selection ( $s = 0.899$  vs  $s_{31-35\text{years}} = 0.974$ ).

For the same construct as above, a  $d$ -value of 0.830 (large effect size) was calculated when respondents employed between 11 and 15 years were compared to the respondents employed between 31 and 35 years. The mentioned comparison obtained means of 2.474 and 3.282, respectively. The respondents employed between 11 and 15 years disagree with the non-managerial employees being ready for change. With standard deviations close to one another, it seems that the respondents employed between 11 and 15 years are more certain of their selection ( $s = 0.848$  vs  $s_{31-35\text{years}} = 0.974$ ).

### 3.12 RESULTS OF FURTHER ANALYSIS ON DEMOGRAPHIC INFORMATION AND INDIVIDUAL STATEMENTS OF TWO CONSTRUCTS

#### 3.12.1 Correlations

TABLE 3-24: CORRELATIONS

		Correlations													
		Age	Qual	Lvl of empl	Yrs in empl pos	Are you generally AGAINST change?	Intent quit	Affective commitment	Work satisfaction	Perceived Power	Perception Change	Perception Change2	Ready Change non-M	Ready Change Man	Ready Change SenMan
Are you generally AGAINST change?	Correlation Coefficient	0.171	-0.111	-.368**	-0.022		0.047	-0.175	0.123	-0.102	.473**		-0.193	0.083	-0.025
	p-value	0.086	0.271	0.000	0.830		0.643	0.080	0.221	0.309	0.000		0.053	0.408	0.808
Personal_competency	Correlation Coefficient	-0.090	0.034	0.029	-0.159	0.147	0.143	0.001	.273**	0.195	0.180	0.161	-0.043	0.091	0.063
	p-value	0.369	0.736	0.771	0.113	0.144	0.153	0.989	0.006	0.051	0.072	0.107	0.666	0.364	0.530
Job_satisfaction	Correlation Coefficient	.212*	-.252*	-0.143	0.172	-0.112	.541**	.576**	.225*	.211*	-0.038	-0.089	.250*	0.167	0.148
	p-value	0.033	0.011	0.154	0.086	0.264	0.000	0.000	0.023	0.034	0.709	0.379	0.012	0.095	0.139
Intent_quit	Correlation Coefficient	.267**	-.221*	-0.120	0.105	0.047		.449**	.235*	0.187	0.022	0.011	.244*	0.159	0.172
	p-value	0.007	0.026	0.234	0.296	0.643		0.000	0.018	0.062	0.824	0.913	0.014	0.113	0.085
Affective_commitment	Correlation Coefficient	0.113	-0.154	0.026	0.148	-0.175	.449**		0.133	.305**	-0.140	-0.172	.306**	-0.028	-0.067
	p-value	0.261	0.125	0.800	0.140	0.080	0.000		0.183	0.002	0.163	0.085	0.002	0.783	0.508
Work_satisfaction	Correlation Coefficient	0.088	-.269**	-.250*	0.022	0.123	.235*	0.133		-0.007	0.183	0.160	0.191	0.037	0.043
	p-value	0.382	0.007	0.012	0.831	0.221	0.018	0.183		0.942	0.067	0.110	0.056	0.710	0.670
Perceived_Power	Correlation Coefficient	-0.045	-0.109	0.060	0.071	-0.102	0.187	.305**	-0.007		-0.011	-0.027	.305**	-0.007	-0.110
	p-value	0.655	0.278	0.549	0.478	0.309	0.062	0.002	0.942		0.916	0.790	0.002	0.947	0.272
Perception_Change	Correlation Coefficient	0.048	-0.194	-.219*	-0.029	.473**	0.022	-0.140	0.183	-0.011			-0.111	-0.026	-0.059
	p-value	0.633	0.052	0.028	0.776	0.000	0.824	0.163	0.067	0.916			0.269	0.793	0.557
Perception_Change2	Correlation Coefficient	0.066	-.196*	-.279**	-0.031		0.011	-0.172	0.160	-0.027			-0.150	0.002	-0.062
	p-value	0.513	0.050	0.005	0.757		0.913	0.085	0.110	0.790			0.133	0.986	0.541
Ready_Change_nonM	Correlation Coefficient	.220*	-.313**	-0.163	.294**	-0.193	.244*	.306**	0.191	.305**	-0.111	-0.150		-0.087	-.327**
	p-value	0.027	0.001	0.103	0.003	0.053	0.014	0.002	0.056	0.002	0.269	0.133		0.386	0.001
Ready_Change_Man	Correlation Coefficient	-0.058	-0.050	-0.156	-0.130	0.083	0.159	-0.028	0.037	-0.007	-0.026	0.002	-0.087		.767**
	p-value	0.566	0.616	0.119	0.197	0.408	0.113	0.783	0.710	0.947	0.793	0.986	0.386		0.000
Ready_Change_SenMan	Correlation Coefficient	-0.009	0.043	-0.041	-0.116	-0.025	0.172	-0.067	0.043	-0.110	-0.059	-0.062	-.327**	.767**	
	p-value	0.928	0.668	0.684	0.248	0.808	0.085	0.508	0.670	0.272	0.557	0.541	0.001	0.000	

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

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

As can be observed from Table 3-24 on the previous page, with a correlation coefficient of 0.767, a strong positive correlation exists, at the 99% confidence level, between the change readiness of senior management and management.

Moderate to strong positive correlations exist, at the 99% confidence level, between change perceptions and if someone is against change or not ( $p = 0.473$ ), intention to quit and job satisfaction ( $p = 0.541$ ), affective commitment and job satisfaction ( $p = 0.576$ ), as well as intention to quit and affective commitment ( $p = 0.449$ ).

Weak to moderate positive correlations exist, at the 99% confidence level, between personal competency and work-related basic needs satisfaction ( $p = 0.273$ ), intention to quit and age (years) ( $p = 0.267$ ), perceived level of power and affective commitment ( $p = 0.305$ ), affective commitment and change readiness of non-managerial employees ( $p = 0.306$ ), as well as perceived level of power and change readiness of non-managerial employees ( $p = 0.305$ ).

At the 99% confidence level, the following weak to moderate negative correlations exist: level of employment and if someone is against change or not ( $p = -0.368$ ), highest qualification obtained and work-related basic needs satisfaction ( $p = -0.269$ ), level of employment and perceptions of change ( $p = -0.368$ ), highest qualification obtained and change readiness of non-managerial employees ( $p = -0.313$ ), as well as change readiness of non-managerial employees and senior management employees ( $p = -0.327$ ).

Correlations at the 95% confidence level can also be observed in Table 3-24.

### **3.13 SUMMARY**

A questionnaire was designed, constructed and distributed as discussed in this chapter to investigate if resistance to change exists at a South African mining surface operation, and if so, to what extent. Possible factors which contribute to the resistance were also investigated.

The questionnaire was made up of six sections; two of which, Sections A and B, consisted of demographical information and the other four sections (Sections C, D, E and F) consisted of questions investigating the different factors which could bring about resistance to change within the employees.

The target and study population was the employees of the South African mining organisation's surface operation. This operation employs one hundred and thirty two (132) people on a permanent basis, thus one hundred and thirty two (132) questionnaires were distributed.

The non-experimental cross-sectional research investigation took up a non-probability sampling campaign, and self-selection/convenience sampling took place as the employees of the South African mining surface operation under investigation was requested to voluntarily fill out the questionnaires. With the assistance of the operation's HR representative the author could successfully convey the purpose of the study to the potential respondents.

One hundred and four questionnaires were returned, with three not completed in full and consequently discarded. Thus, one hundred and one (101) respondents completed the questionnaire without fault, thus rendering the response rate at 76.5%.

Table 3-15, earlier in this chapter, draws evidence that the internal consistency of the questionnaire is credible, as all coefficients were found to be well above 0.5, therefore it can be concluded that the measuring instrument used was reliable.

Demographic information; gender, age, race, highest qualification obtained, current level of employment and years of work experience, was obtained from the respondents and analysed accordingly. Three other questions were also raised in the questionnaire, *id est*: Are you a member of a union, to which the respondents should have answered either yes or no. If answered yes to the latter question, they should have indicated with which union they are a member of and what role they fulfil in the specific union. Frequency distributions, mean values and standard deviations were computed for every item.

Most of the factors/constructs investigated hold a mean higher than 3, with exception of perceived level of power, holding the lowest mean of 2.460, and the non-managerial employees' change readiness at the second lowest mean of 2.789. Table 3-15 also displays the following means from largest to smallest: personal competency ( $\bar{x} = 4.470$ ), job satisfaction ( $\bar{x} = 3.996$ ), intent to quit ( $\bar{x} = 3.777$ ), senior management employees' change readiness ( $\bar{x} = 3.743$ ), work-related basic needs satisfaction ( $\bar{x} = 3.670$ ), management employees' change readiness ( $\bar{x} = 3.551$ ), perception of change (excluding the question on "against change?") ( $\bar{x} = 3.444$ ), perception of change (including the question on "against change?") ( $\bar{x} = 3.373$ ), as well as affective commitment ( $\bar{x} = 3.335$ ).

In order to determine the differences between the means of different groups inside the demographic variables and the factors/constructs being investigated, independent *t*- and ANOVA tests were conducted. Effect sizes, *d*-values, were also calculated to investigate if statistical significant differences exist between demographic variables concerning the factors/constructs.

Work-related basic need satisfaction, with a  $d$ -value of 0.919, has a high effect size. Respondents who are from the Black African ethnic group tend to agree more to the questions asked ( $\bar{x} = 3.930$ ), than the respondents from the White ethnic group, as the White group indicated a neutral mind-set to the questions asked ( $\bar{x} = 3.033$ ). It would also appear that the respondents from the Black African group were more certain of their selections as their standard deviation, at 0.790, was smaller. Constructs with medium and low effect sizes were also tabulated and reported on.

For the construct, work-related basic needs satisfaction, a  $d$ -value of 0.927 (large effect size) was calculated when respondents, who are affiliated with NUM, were compared to respondents who are affiliated with UASA. The mean values for the referred to comparison were 3.929 and 2.905, respectively. The respondents affiliated with NUM agreed with that their jobs satisfy their basic work-related needs, while the respondents who are affiliated with UASA indicated that they had a more neutral mind-set towards this topic.

Again, the construct, work-related basic needs satisfaction, rendered the highest  $d$ -value for highest qualification obtained when the respondents who have a qualification less than Matric were compared to respondents with a diploma ( $d = 0.991$ ), this indicates that the effect is large.

A  $d$ -value of 0.929 (large effect size) was obtained when the respondents with Matric were compared to the respondents with a diploma for the construct, if the respondents were against change, in general.

Another large effect construct which showed a  $d$ -value of 0.899, was change readiness for non-managerial employees, which was obtained when the respondents with and without a Matric qualification were compared.

The last construct which scored a large effect size, was on the construct, intention to quit, where the respondents with less than Matric were compared with those with a diploma ( $d = 0.893$ ).

Another large effect size, with a  $d$ -value of 0.979, was obtained when the respondents employed at an A-level work grade were compared to the respondents in C-upper positions for the construct, if the respondents were against change, in general.

Also recorded as a large effect size, with a  $d$ -value of 0.814, were the respondents employed at a B-level work grade, compared to the respondents in C-upper positions for the construct, if the respondents were against change.

For the construct, change readiness of non-managerial employees, as presented in Table 3-22, a  $d$ -value of 0.914 (large effect size) was calculated when respondents employed between 1 and 10 years were compared to respondents employed between 31 and 35 years.

For the same construct as the latter, a  $d$ -value of 0.830 (large effect size) was calculated when respondents employed between 11 and 15 years were compared to the respondents employed between 31 and 35 years.

As can be observed from Table 3-24, with a correlation coefficient of 0.767, a strong positive correlation exists, at the 99% confidence level, between the change readiness of senior management and management employees' change readiness.

Moderate to strong positive correlations exist, at the 99% confidence level, between change perceptions and if someone is against change or not ( $p = 0.473$ ), intention to quit and job satisfaction ( $p = 0.541$ ), affective commitment and job satisfaction ( $p = 0.576$ ), as well as intention to quit and affective commitment ( $p = 0.449$ ).

The next chapter will consist of conclusions and recommendations from the obtained findings in this chapter as well as the literature review in the previous chapter.

## CHAPTER 4: CONCLUSIONS AND RECOMMENDATIONS

### 4.1 INTRODUCTION

The intent of this ultimate chapter is to discuss the results obtained within this study, as well as to draw conclusions from the findings from both of the empirical study as well as the literature review as was presented in chapters 2 and 3.

The reliability of the questionnaire was validated as well as the reliability of the factors identified and measured in the distributed questionnaires.

Twelve (12) factors, which were derived from the literature review in section 2, were evaluated and discussed in detail. They were:

1. Personal competency
2. Job satisfaction
3. Intention to quit
4. Affective commitment
5. Work-related basic needs satisfaction
6. Perceived level of power
7. Employee's perception of change (Only questions 48 to 52)
8. Employee's perception of change (*\*\*Perception of change 2 relates to all questions concerned with the respondents' perception of change, id est, questions 48 to 52 as well as the inclusion of question 45, id est, "Are you against change?"...which is also a question pertaining on how they 'feel' about change in general.*)
9. The direct question: Are you against change?
10. Change readiness of non-managerial employees
11. Change readiness of management employees
12. Change readiness of senior management employees

Recommendations were made in terms of managing resistance to change or managing change; by creating readiness, by implementing effective management communication and participation decision making in the organisation, so as to decrease the employees' levels of uncertainty.

The chapter was finalised by consolidating the objectives achieved and listing recommendations for future research to be conducted.

## 4.2 CONCLUSIONS

The conclusions will follow the same arrangement as the questionnaire, *id est*, firstly the demographics will be discussed, followed by the internal consistency (Cronbach Alpha) results. Subsequently an interrogation will be conducted on the dimensions of change readiness and – resistance. Finally, the meaningful relationships between demographic variables are discussed.

### 4.2.1 Demographic information

Demographic information, which included gender, age, race, highest qualification obtained, current level of employment and years of work experience, was acquired from the respondents and analysed accordingly. Three other questions were also raised in the questionnaire, *id est*: Are you a member of a union, to which the respondents should have answered either yes or no. If answered yes to the latter question, they should have indicated with which union they are a member of and what role they fulfil in the specific union.

Herewith a summary of the findings in the demographical information secured:

- Majority of the respondents to this survey, at 87%, were males. Thus, the remaining 13% consisted of females.
- Individuals aged between 46 and 55 years made up 36% of the total respondents in this survey, while 28% were from the 56+ age group, 19% were from the 36 to 45 years age group, and the remaining 17% were younger than 36 years.
- The majority of the respondents are from Black African descent (66%), while White respondents made up 30% of the total respondents and 4% were from Coloured ancestry.
- The respondents representing the individuals without a Matric qualification was the largest group in this survey, 41%. 29% of respondents were in possession of a Matric certificate, while 16% holds some type of a Trade certificate. Only 8% of the respondents hold a diploma, while 3% obtained a B-degree and the other 3% obtained an Honours/Post graduate qualification.
- 2% of respondents represented the management portion (D-upper) of the sample, while 21% of the respondents were in supervisory roles (C-upper). The remaining 77% was made up of 23% (of 78 non-managerial employees) being employed in the A-level. 51% of the 78 respondents, who did not fall into supervisory- or higher positions, were employed in the B-level category and finally 26% of these respondents were categorised in the C-lower category.

- 26% of respondents had more than 30 years in their current positions. 31% had experience of between 20 and 30 years in their current position and 17% acquired experience of less than 10 years.
- 94% of the respondents were affiliated with a union on the mining operation, while the remainder opted for not belonging to a union.
- Of the 94%, 69% associated with NUM (National Union of Mineworkers), 15% with UASA (United Association of South Africa). 13% with Solidarity and 3% with AMCU (Association of Mineworkers and Construction Union)
- Also, of the 94% of respondents affiliated with a union, 94% is a member, while 3% are section stewards, and the remaining 3% are members of the plant committee.

#### **4.2.2 Reliability of the questionnaire used**

The results showed that the internal consistency of the questionnaire is acceptable, with all coefficients well above the 0.5 level, indicating reliability of the questionnaire.

#### **4.2.3 Evaluation of the twelve factors which bring about resistance to change**

The first eight factors' Likert scales ranged from strongly disagree (1), disagree (2), neutral (3), agree (4) to completely agree (5):

1. Personal competency
2. Job satisfaction
3. Intention to quit
4. Affective commitment
5. Work-related basic needs satisfaction
6. Perceived level of power
7. Employee's perception of change (Only questions 48 to 52)
8. Employee's perception of change (*\*\*Perception of change 2 relates to all questions concerned with the respondents' perception of change, id est, questions 48 to 52 as well as the inclusion of question 45, id est, "Are you against change?"...which is also a question pertaining on how they 'feel' about change in general.*)

##### **4.2.3.1 Personal competency**

The results showed that if employees are not equipped with adequate skills or in possession of relevant knowledge, it can also bring about resistance to change (McShane & Von Glinow, 2010).

According to Cummings and Worley (2015), employees generally do not support change within an organisation due to the fact that it will potentially influence their level of worth, their coping abilities and their competencies.

#### 4.2.3.1.1 Means and standard deviations

According to table 3-15, personal competency had the highest mean at 4.470 and a standard deviation of 0.482, which indicated that respondents agreed to completely agreed to feeling competent in their respective jobs, and that they were quite certain of their selections.

#### 4.2.3.1.2 Personal competency correlations

Judging by the correlation calculations done, a statistically weak positive correlation, at a 99% confidence level, could be drawn between personal competency and work-related basic needs satisfaction (0.273). This means that if a person's belief of personal competency increases, so will his/her basic need satisfaction for work-related matters. Similar findings have been from the likes of Devi (2007), Labbai (2008) and Waluyo (2013), as cited by Arifin (2014), in which it was declared that improved competency results in a positive and significant effect on job satisfaction.

No significant relationship could be drawn in this study between personal competency and resistance to change, which means that other factors in terms of resistance to change may be more important, but it seems to be relatively independent to personal efficacy beliefs/confidence in this sample.

#### **4.2.3.2 Job satisfaction, turnover intent and work-related basic needs satisfaction**

In a study conducted by Struijs, it was found that resistance to change was more evident in employees who were dissatisfied with their jobs (2012).

Uncertainty is associated with stress (Ashford, 1988; Pollard, 2001), intentions to quit (Johnson *et al.*, 1996), and it negatively correlated with job satisfaction (Nelson *et al.*, 1995), commitment (Hui & Lee, 2000) and trust in the organisation (Schweiger & DeNisi, 1991).

An individual's basic psychological needs for freedom, capability and relatedness have been found to be a critical forecaster of a person's optimal functioning in different life realms (Van den Broeck *et al.*, 2010).

Struijs (2012) also concluded that as a result of job dissatisfaction, and high levels of resistance, employees had a higher turnover intention, due to the fact that their job did not fulfill their needs and as a consequence would opt to find another job.

#### 4.2.3.2.1 Means and standard deviations

With means close to 4, job satisfaction ( $\bar{x} = 3.996$ ,  $s = 0.599$ ), intention to quit ( $\bar{x} = 3.777$ ,  $s = 1.057$ ) and work-related basic need satisfaction ( $\bar{x} = 3.670$ ,  $s = 0.933$ ) indicated that the respondents agreed that they are satisfied with their jobs and work-related basic needs as well as that they do not intend on quitting any time soon.

#### 4.2.3.2.2 Job satisfaction, intention to quit and work-related basic needs satisfaction correlations

It was found that moderate to strong positive correlations existed, at the 99% confidence level, between intention to quit and job satisfaction ( $\rho = 0.541$ ), indicating that if a person is satisfied with his/her job, they have no or low intention to quit. A moderate to slightly stronger positive correlation was found between affective commitment and job satisfaction ( $\rho = 0.576$ ), which means that if a person is satisfied with his/her job; their affective commitment towards the company would most probably be high.

Furthermore, a moderate to strong positive correlation was found to exist, at the 99% confidence level, between intention to quit and affective commitment ( $\rho = 0.449$ ).

#### 4.2.3.2.3 Independent *t*-tests

Work-related basic need satisfaction, with a *d*-value of 0.919, has a high effect size on race. Respondents who are from the Black African ethnic group tend to agree more to the questions asked ( $\bar{x} = 3.930$ ), than the respondents from the White ethnic group, as the White group indicated a neutral mind-set to the questions asked ( $\bar{x} = 3.033$ ). It would also appear that the respondents from the Black African group were more certain of their selections as their standard deviation, at 0.790, was smaller.

With a *d*-value of 0.706, work-related basic needs satisfaction displayed a medium effect on this survey, with regards to gender. Males tend to agree more to the questions asked ( $\bar{x} = 3.769$ ), than the females, as the females indicated a neutral mind-set to the questions asked ( $\bar{x} = 3.000$ ). It would also appear that the males were more sure of their selections as their standard deviation was smaller ( $s = 0.872$ ).

The construct, intention to quit, with a  $d$ -value of 0.522, had a medium effect size, with regards to union membership. Respondents who are not members of a union, seemed more sure of their selection, as their standard deviation was lower than that of the respondents who are affiliated with a union,  $s = 0.524$ . For the intention to quit, the union members agreed with not intending to quit ( $\bar{x} = 3.811$ ), while the non-union members were more neutral in their selections (3.250).

Work-related basic need satisfaction, with a  $d$ -value of 0.506, has a medium effect, with regards to union affiliation, on this survey. Respondents who are not members of a union seemed more sure of their selection as their standard deviation was lower than that of the respondents who are affiliated with a union ( $s = 0.720$ ). The union members tend to agree with being satisfied with work-related needs ( $\bar{x} = 3.698$ ), while the non-union members were more neutral in their selections ( $\bar{x} = 3.222$ ).

#### 4.2.3.2.4 ANOVA tests

For the demographic, highest qualification obtained, the construct, work-related basic needs satisfaction, rendered the highest  $d$ -value, when the respondents who have a qualification less than Matric were compared to respondents with a diploma ( $d = 0.991$ ), this indicates that the effect is large.

A  $d$ -value of 0.927 (large effect size) was calculated when respondents, who are affiliated with NUM, were compared to respondents who are affiliated with UASA, with regards to union affiliation. The mean values for the referred to comparison were 3.929 and 2.905, respectively. The respondents affiliated with NUM agreed with that their jobs satisfy their basic work-related needs, while the respondents who are affiliated with UASA indicated that they had a more neutral mind-set towards this topic.

The construct, intention to quit, scored a large effect size figure, where the respondents with less than Matric were compared with those respondents with a diploma ( $d = 0.893$ ). The means of the mentioned comparison were 3.976 and 3.036, respectively; *id est*, the respondents who have less than a Matric qualification agreed that they had no intention to quit, while the respondents with Matric were neutral on the question's response. Both groups were equally sure of their choices as they both held standard deviations close to 1.050.

Once again, for the construct, union affiliation, it was found that comparing NUM member respondents with Solidarity member respondents, reflected a medium effect, as the  $d$ -value was found to be 0.612. The respective mean values for the referred to comparison were 3.929 and 3.194. Again, the respondents affiliated with NUM, agreed with that their jobs satisfy their basic

work-related needs, while the respondents who are affiliated with Solidarity, as with UASA, indicated that they had a more neutral mind-set towards this topic. UASA's mean was the lowest, though.

The results did not indicate significant relationships between job satisfaction and resistance to change. In addition, no significant correlations were identified between intention to quit and resistance to change. Work-related basic needs satisfaction also did not show any significant correlation with resistance to change.

#### **4.2.3.3 Perceived level of power**

An interesting finding in a study conducted by Van Eeden *et al.* (2016) established that the perceived highest level of power stakeholders had the highest probability of having resistance, sixty-six percent (66%) of the stakeholders considered to have level 5 power signaled resistance, while only twenty-one percent (21%) of the level 1 stakeholders showed resistance. This study clearly confirmed that level of power and resistance showed positive interdependence (Van Eeden *et al.* 2016).

##### **4.2.3.3.1 Means and standard deviations**

The construct with the lowest mean, at 2.46 and a standard deviation equal to 1.062, was the perceived level of power. In particular, the respondents disagreed that they had any influence on any decisions made within the organisation.

##### **4.2.3.3.2 Perceived level of power correlations**

Weak to moderate positive correlations exist, at the 99% confidence level, between perceived level of power and affective commitment ( $p = 0.305$ ), as well as between perceived level of power and change readiness of non-managerial employees ( $p = 0.305$ ).

No relationship was identified between perceived level of power and resistance to change.

#### **4.2.3.4 Change readiness**

This section studied the change readiness of the following work groups:

- Change readiness of non-managerial employees
- Change readiness of management employees
- Change readiness of senior management employees

The three criteria in which change readiness was measured were willingness, capability and competency.

#### 4.2.3.4.1 Means and standard deviations

It was observed that, with a mean of 3.743 and a standard deviation of 1.025, senior management employees were perceived as being the readiest for change. The respondents also somewhat agreed that managerial employees were ready for change ( $\bar{x} = 3.551$ ,  $s = 0.857$ ). The non-managerial group were ranked below neutral, thus indicating that the respondents felt that the non-managerial respondents were not quite ready, in terms of willingness, capability and competency, for managing and implementing change.

#### 4.2.3.4.2 Change readiness correlations

With a correlation coefficient of 0.767, a strong positive correlation exists, at the 99% confidence level, between the change readiness of senior management and management's change readiness. Thus, if senior management becomes more willing, capable and competent, the management employees would follow suit.

At the 99% confidence level, the following weak to moderate negative correlation exist: change readiness of non-managerial employees and senior management employees' change readiness ( $p = -0.327$ ).

Weak to moderate positive correlations exist, at the 99% confidence level, between affective commitment and change readiness of non-managerial employees ( $p = 0.306$ ), as well as perceived level of power and change readiness of non-managerial employees ( $p = 0.305$ ).

#### 4.2.3.4.3 Independent *t*-tests

For the construct, change readiness of non-managerial employees, a *d*-value of 0.914 (large effect size) was calculated when respondents employed between 1 and 10 years were compared to respondents employed between 31 and 35 years. The mentioned comparison obtained means of 2.392 and 3.282, respectively. From this is indicated that the respondents with between 1 and 10 years of service disagreed with non-managerial employees being ready for change, while the respondents who are employed between 31 and 35 years are neutral whether the non-managerial employees are ready for change. With standard deviations close to one another for these two groups, it seems that the respondents employed between 1 and 10 years are more certain of their selection ( $s = 0.899$  vs  $s_{31-35\text{years}} = 0.974$ ).

The change readiness for non-managerial employees, with a  $d$ -value of 0.610, has a medium effect on this survey. Respondents who are not members of a union seemed more sure of their selection, as their standard deviations were lower than that of the respondents who are affiliated with a union  $s = 0.723$ . The respondents who were part of a union felt neutral about the non-managerial employees' change readiness, while the respondents who do not belong to a union felt that the non-managerial employees were not ready for change.

#### 4.2.3.4.4 ANOVA tests

Another large effect size, a  $d$ -value of 0.899, for change readiness of non-managerial employees showed that when the respondents with and without a Matric qualification were compared, the means of the mentioned comparison were 2.287 and 3.294, respectively. The respondents who did not possess a Matric qualification were towards being neutral that the non-managerial employees are ready for change, while the respondents with Matric disagreed with the non-managerial employees being change ready. The respondents with Matric, through their standard deviation of 0.979, displayed more surety of their answers for this construct than the respondents with less than Matric ( $s = 1.119$ ).

For the same construct as above, a  $d$ -value of 0.830 (large effect size) was calculated when respondents employed between 11 and 15 years were compared to the respondents employed between 31 and 35 years. The mentioned comparison obtained means of 2.474 and 3.282, respectively. The respondents employed between 11 and 15 years disagree with the non-managerial employees being ready for change. With standard deviations close to one another, it seems that the respondents employed between 11 and 15 years are more certain of their selection ( $s = 0.848$  vs  $s_{31-35\text{years}} = 0.974$ ).

The results did not indicate significant relationships between change readiness and resistance to change. This, however, is in contrast to what Hultman (2003) found in his article, "Managing resistance to change", in which he states that "anything which causes resistance can be expected to undermine readiness at any point in time".

#### 4.2.3.5 Cognitive dissonance

The theory of cognitive dissonance was proposed by Leon Festinger in 1957, in which it alleged that people try to be consistent in their attitudes and behaviour. If not achieved, a "state of tension", *id est*, cognitive dissonance, occurs when inconsistency is sensed in which our perceptions (cognitions), beliefs, attitudes and/or behaviours clash, which may bring about irrational and, at times, maladaptive behaviour, attitudes or beliefs, to name but a few, in individuals (Festinger, 1957). As humans, this feeling of dissonance is irksome (Jones, 1990),

hence why we encourage ourselves to decrease it or to do away with it completely, ultimately achieving inner peace (agreement) within one's self.

Applying the above to organisational change, it is with certainty that it can be said that if an organisation brings about change which is uncertain or conflicting with the beliefs and/or attitudes of the employees, resistance would be a reality (Burnes & James, 1995). As was mentioned already in the conclusions drawn with job satisfaction and turnover intent, uncertainty is associated with stress (Ashford, 1988; Pollard, 2001), intentions to quit (Johnson *et al.*, 1996), and it negatively correlated with job satisfaction (Nelson, Cooper & Jackson, 1995), commitment (Hui & Lee, 2000) and trust in the organisation (Schweiger & DeNisi, 1991). It is probable for employees to resist change if they relate to one or all of the following:

- If they do not know or understand the appropriateness of the change (Agocs, 1997),
- If they feel that the change could potentially influence their level of worth, their coping abilities and their competencies (Cummings & Worley, 2015), and
- Ambivalent attitudes exist for the employee(s).

The factors, perception of change and perception of change 2 were investigated and subjected to various analyses.

*Note: Perception of change 2 = questions 45, 48 to 52*

*Perception of change = questions 48 to 52*

#### 4.2.3.5.1 Means and standard deviations

Perception of change 2 obtained a mean of 3.444, while perception of change had a slightly lower mean of 3.373. Both these constructs indicated that the respondents were leaning towards neutral feelings toward change. For both, it also seemed that the respondents were equally certain on their selections.

#### 4.2.3.5.2 Perception of change correlations

A moderate to strong positive correlation exists, at the 99% confidence level, between change perceptions and if someone is against change or not ( $p = 0.473$ ). Thus, if a person feels uncertain, feels negative about change in general, feels that change would threaten his/her job and if the person feels that the change will mean more losses than gains, they would most likely be against change, and would ultimately resist it.

The size effects of the remaining constructs were small; thus no statistical significant differences were apparent between the stated groups with regards to the remaining constructs.

### **4.3 RECOMMENDATIONS**

The results indicated that employees feel that their input would not influence the organisation's decision-making processes. Furthermore, it was found that if employees feel uncertain, feel negative about change in general, feel that change would threaten their job and if they feel that the change will mean more losses than gains, they would most likely be against change. This would ultimately end up in employees resisting change and finally the organisation would be in a battle to 'argue' with non-cooperative employees. Disciplinary action and grievances will soon follow, let alone strikes and so forth.

Companies, like the one being investigated, are faced with tough economic climates, market demands and the like on a continuous basis which drives them to rethink and re-engineer the way they do business. This, often more than not, leads to strategic direction transformations, restructuring and staffing changes, in order to stay competitive or, in more-worse cases, stay in business. Thus, the last thing any manager wants to deal with is conflict. Change management have been ignored by many in the past, possibly contributing to the rise in labour disputes and/or disagreements. Employees are not always included or kept in the loop as to the strategical changes or transformational intents. Employees may not realise that the goal post have shifted, thus only realising when they see the actual implementation of the changes and feel the outcomes in their pockets and in terms of employment security and/or loss of opportunities.

Russell (2017), states that approximately 70 percent of meaningful changes executed by organisations, fail. One of the main reasons these organisations' change propositions fail is the resistance exerted by their employees (Russell, 2017).

This resistance, however, can be successfully managed if the factors that give birth to the resistance can be identified and managed accordingly.

In this investigation's case, the respondents' perception of change indicated that if respondents perceive change as being uncertain, being a negative feeling, being a threat to their jobs and meaning that more will be lost than gained when it is brought about, then they will most likely be against change. This could, when the change is then brought about, result in them resisting it.

The respondents did not feel as if they have any influence on any decisions made within the organisation. Being the mining industry, the autocracy is expected. It could also be as a result of the fact that the most part of the workforce is unionised.

Self (2007) states that uncertainty can appear due to lack of information, how others perceive the change, and whether the individual has the knowledge, skills and ability to be an efficient part of the change process.

Klein (1996) indicated that communication from management is a strategy usually used and recommended during the change process to decrease the employees' levels of uncertainty. Bordia *et al.* (2004a) suggests that if change needs to be perceived as a "step-in-the-right-direction" by all, then these two activities need to be implemented to reduce the negative outcomes of the change process:

1. In order for employees to feel more prepared and to cope better with change, they are to be supplied with quality change-related information via management.
  - Bastien (1987), DiFonzo and Bordia (1998), Richardson and Denton (1996) and Schweiger and DeNisi (1991), to name but a few, recognised the link between communication and employee uncertainty.
    - Schweiger and DeNisi (1991) discovered that a group, who was supplied with systematic communication, had lower uncertainty levels.
      - Systematic communication is defined as communication which is timeous, credible and trustworthy (Bastien, 1987; Richardson & Denton, 1996).
  - Antonellis (2016) suggests these actions when communicating the change:
    - Communicate the reason as to why the change is important,
    - Ensure that communication is done with both internal- and external stakeholders,
    - Request input from stakeholders so as to ensure that the issue to solve is adequately identified,
      - Provide them with enough time to ponder and to supply recommendations and/or alternatives to the proposed change.
    - Allow for potential resistance points so as to manage it accordingly, (do not ignore resistance),
2. In order for employees to increase their awareness and understanding of the changes, as well as furnishing those with a sense of control over change effects would mean to involve them more in the decision-making processes.

- Participation in decision making, as defined by Sagie *et al.* (1995), is the process where influence or decision-making is shared between supervisors and subordinates.
- Jackson (1983) and Sagie *et al.* (1995) discovered that higher levels of perceived influence/power were due to employee participation levels.
- Participation in decision making is linked to increased levels of control (Ganster & Fusilier, 1989; Sagie & Koslowsky, 1996), particularly when it is meaningful and relevant to the employees, as uncertainty, according to Self (2007), is a sense of not being in control.

Chapter 2.4 lists and discusses five activities which contribute to effective change management, as literature has stressed the creation of visions and wanted futures, obtaining support, and effectively managing the change toward them:

6. Motivating change,
7. Creating vision of change,
8. Developing political support,
9. Managing the transition of change, and
10. Sustaining momentum.

#### **4.4 ACHIEVEMENT OF OBJECTIVES**

The investigation's success lies within the assessment on the achievement of the primary and secondary objectives set in chapter 1.3.

##### **4.4.1 Primary objective**

The primary objective of this study was to investigate if resistance to change is evident in employees, as stakeholders at a South African surface mining operation. Moreover, if resistance to change was found to be evident, this study investigated the extent of the resistance and identified the factors that bring about resistance to change on this specific surface operations mining site.

This objective was fulfilled by realising the secondary objectives of the investigation, listed overleaf.

#### 4.4.2 Secondary objectives

In order to achieve the primary objective, the following secondary objectives were constructed:

- Define the concept of resistance to change and evaluate the impact it has on organisations and employees according to literature.
- This specific study on the surface operations at mining organisations has not yet been conducted, thus no other published information exists on this specific subject. The study was to address this gap in the literature.
- Extensive studies in resistance to change topics have shown that affective commitment towards the organisation elicits positive perceptions of change valence. This is also directly related to lower the intent to resist change, which is why this investigation in the surface operations of mining organisations was important to conduct, to verify if it has the same effect.
- Further studies have shown positive interdependence between level of power and resistance. More to this, resistance is more likely to take an active form when power levels are high and a passive one when power levels are low, thus it would be interesting to confirm this theory on this operation.
- To construct and validate a questionnaire based on the main factors contributing to change readiness and resistance to change.
- Examine the differences between the demographical variables with regard to the tendency for an individual to resist change in a surface mining operation in South Africa.
- This study aims to contribute to the development of effective change management systems to enable mining organisations to implement these effective change management practices.

The secondary objectives as listed above were achieved and can be found in this document in the respective sections:

- The concept of resistance to change was defined and the impact on organisations and employees were evaluated in chapter 2.5.
- This specific study on the surface operations at mining organisations has not yet been conducted, thus no other published information exists on this specific subject. The study addressed this gap in the literature.
- Extensive studies in resistance to change topics have shown that affective commitment towards the organisation elicits positive perceptions of change valence. This is also

directly related to lower the intent to resist change. This investigation did not render this same effect and the total conclusion can be consulted in chapter 4.2.3.

- Further studies have shown positive interdependence between level of power and resistance. More to this, resistance is more likely to take an active form when power levels are high and a passive one when power levels are low, thus it would be interesting to confirm this theory on this operation. This investigation did not render a relationship between perceived level of power and resistance to change and can be consulted in chapter 4.2.3.3.
- A reliable questionnaire was designed and constructed which was based on the main factors contributing to change readiness and resistance to change.
- The differences between the demographical variables with regard to the tendency for an individual to resist change were examined and discussed in chapter 3.11.
- This study will aid in drawing up effective change management systems to enable management of these mining organisations to implement change management practices to ultimately manage successful, effective and sustainable transformations within their ever-changing organisations.

#### **4.5 SUGGESTIONS FOR FURTHER RESEARCH**

Change is necessary in an organisation to survive technological advances within the industry. Incorporating changes to an organisation which finds itself in crisis mode is a necessity if the organisation is to survive unstable economic periods. These organisations' processes, operations and/or systems are potentially deemed ineffective, hence why these processes need to be rectified sooner rather than later. This holds true, specifically for the gold industry within South Africa. If the way, in which these mines operate, is not changed for the better, they will become extinct sooner rather than later.

As per the literature reviewed in section 2, approximately 70 percent of meaningful changes executed by organisations, fail. One of the main reasons for these organisations to fail in their change propositions is the resistance exerted by their employees. These reasons include fear of the unknown, increased workload and inadequate understanding of the need for the change (Russell, 2017). People also resist change when the change endangers their job security, their routines as well as their power or status in an organisation (University of Wisconsin-Milwaukee, 2017).

This resistance, however, can be successfully managed if the factors that give birth to the resistance can be identified and managed accordingly.

- The scope of the study was limited to only one operation in South Africa. Similar research can be conducted on other mining sites and/or other organisations, industries, and so forth.
- The study looked into employees specifically in the lower work levels of the organisation. The same type of research can be done to investigate the higher Paterson grading levels within the organisation, in order to highlight some of the differences between organisational levels in terms of experience of change as indicated in the results of this study.
- An experimental longitudinal study is also suggested, to measure the effect of effective management communication and participation decision making related to resistance to change. This same study can be conducted on a similar operation, and then, subject only one of these two operations, which will have baseline resistance to change conclusions, to effective management communication and participation in decision making to measure the effect of these two activities as suggested by Bordia *et al.* (2004a).

#### 4.6 SUMMARY

Chapter 3's empirical study results were concluded on and discussed in this ultimate chapter. The respondents' demographic information, which included gender, age, race, highest qualification obtained, current level of employment and years of work experience, was discussed as well as the respondents' union affiliation was acquired and discussed.

The reliability of the questionnaire was validated as well as the reliability of the factors identified and measured in the distributed questionnaires.

An evaluation of the twelve (12) factors:

1. Personal competency
2. Job satisfaction
3. Intention to quit
4. Affective commitment
5. Work-related basic needs satisfaction
6. Perceived level of power
7. Employee's perception of change (Only questions 48 to 52)
8. Employee's perception of change (*\*\*Perception of change 2 relates to all questions concerned with the respondents' perception of change, id est, questions 48 to 52 as well*)

*as the inclusion of question 45, id est, "Are you against change?"...which is also a question pertaining on how they 'feel' about change in general.*

9. The direct question: Are you against change?

10. Change readiness of non-managerial employees

11. Change readiness of management employees

12. Change readiness of senior management employees,

which bring about resistance to change were discussed in detail.

Recommendations were made in terms of managing resistance to change or managing change, for that matter, by implementing effective management communication and participation decision making in the organisation, so as to decrease the employees' levels of uncertainty.

The chapter was finalised by consolidating the objectives achieved and listing recommendations for future research to be conducted.

## REFERENCE LIST

- Ackerman, F. & Eden, C. 2011. Strategic management of stakeholders: theory and practice. *Long range planning*, 44:179-196.
- Agocs, C. 1997. Institutionalized resistance to organizational change: denial, inaction and repression. *Journal of business ethics*, 16(9):917-931.
- Allen, N.J. & Meyer, J.P. 1990. The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of occupational psychology*, 63(1):1-18.
- Ally, H.B., Agbolade, O.K. & Adunni, A.H. 2016. Perception of change management in Nigerian universities. *Journal belo horizonte*, 15(2):66-80.
- Amason, A.C. 1996. Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: resolving a paradox for top management teams. *Academy of management journal*, 39:123-148.
- Antonellis, P.J., Jr. 2016. Change management: recommendations for prechange success. *Fire engineering*, 169(8):49-54.
- Arifin, H.M. 2014. The influence of competence, motivation, and organisational culture to high school teacher job satisfaction and performance. *International education studies*, 8(1):38-45.
- Armenakis, A.A. & Harris, S.G. 2002. Crafting a change message to create transformational readiness. *Journal of organizational change management*, 15(2):169-183.
- Armenakis, A.A., Harris, S.G. & Feild, H.S. 1999. Making change permanent: a model for institutionalizing change interventions. (In Passmore, W & Woodman, R., eds. *Research in organizational change and development*. Greenwich, CT: JAI Press. 12:289-319).
- Armenakis, A.A., Harris, S.G. & Mossholder, K.W. 1993. Creating readiness for organizational change. *Human relations*, 46(6):681.
- Ashford, S.J., Lee, C. & Bobko, P. 1989. Constant, causes, and consequences of job in security: a theory-based measure and substantive test. *Academy of management journal*, 32(4):803-829.
- Bareil, C. 2013. Two paradigms about resistance to change. *Organizational development journal*, Fall:59-71.

- Bastien, D.T. 1987. Common patterns of behaviour and communication in corporate mergers and acquisitions. *Human resource management*, 26(1):17-33.
- Basu, C. 2017. What is the meaning of organisational change?.  
<http://smallbusiness.chron.com/meaning-organizational-change-35131.html> Date of access: 30 Oct. 2017.
- Bickman, L. & Rog, D.J 2008. The handbook of applied social research methods. 2nd ed. Thousand Oaks, CA: Sage.
- Block, L.G. & Keller, P.A. 1998. Beyond protection motivation: an integrative theory of health appeals. *Journal of applied social psychology*, 28(17):1584-1608.
- Bordia, P., Hunt, L., Paulsen, N., Tourish, D., & DiFonzo, N. 2004a. Uncertainty during organizational change: is it all about control? *European journal of work and organizational psychology*, 13(3):345-365.
- Bordia, P., Hobman, E., Jones, E., Gallois, C. & Callan, V.J. 2004b. Uncertainty during organizational change: types, consequences, and management strategies. *Journal of business and psychology*, 18(4):507-532.
- Brayfield, A.H. & Rothe, H.F. 1951. An index of job satisfaction. *Journal of Applied Psychology*, 35:307-311.
- Burke, W.W., Lade, D.G. & Paine, J.W. 2008. Organization change: a comprehensive reader. San Francisco, CA: Jossey-Bass.
- Burnes, B. 2015. Understanding resistance to change – building on Coch and French. *Journal of change management*, 15(2):92-116.
- Burnes, B. & James, H. 1995. Culture, cognitive dissonance and the management of change. *International journal of operations and production management*, 15(8):14-33.
- Burnes, B. & Jackson, P. 2011. Success and failure in organizational change: an exploration of the role of values. *Journal of change management*, 11(2):133-162.
- Choi, M. & Ruona, W.E.A. 2011. Individual readiness for organizational change and its implications for human resource and organization development. *Human resource development review*, 10(1):46-73.

- Coch, L. & French, J.R.P. (Jr.). 1948. Overcoming resistance to change. *Human relations*, 1:512-532.
- Cohen, J. 1988. *Statistical power analysis for behavioural sciences*. 2nd ed. Hillsdale, NJ: Erlbaum.
- Conner, R.D. 1993. *Managing at the speed of change*. New York, NY: Randon House.
- Cummings, T.G. & Worley, C.G. 2015. *Organization development and change*. 10th ed. Stamford: Cengage Learning.
- Dent, E.B. & Goldberg, S.G. 1999. Challenging “resistance to change”. *Journal of applied behavioral science*, 35(1):25-41.
- Diamond, M.A. 2003. Organizational immersion and diagnosis: the work of Harry Levinson. *Organisational and social dynamics: an international journal of psychoanalytic, systemic and group relations perspectives*, 3(1):1-18.
- DiFonzo, N. & Bordia, P. 1998. A tale of two corporations: managing uncertainty during organizational change. *Human resource management*, 37(3&4):295-303.
- Eisenbach, R., Watson, K. & Pillai, R. 1999. Transformational leadership in the context of organizational change. *Journal of organizational change*, 12(2):80-88.
- Ellis, S.M. & Steyn, H.S. 2003. Practical significance (effect sizes) versus or in combination with statistical significance (p-values). *Management dynamics*, 12(4):51-53.
- Els, C. 2013. Study unit 5: sampling. Study school by NWU School of Business and Governance. [PowerPoint presentation].
- Elving, W.J.L. 2005. The role of communication in organisational change. *Corporate communications: an international journal*, 10(2):129-138.
- Embassy of the Republic of South Africa. South Africa at a glance.  
<http://www.southafrica.be/wp-content/uploads/2012/10/south-africa-provinces-africam.gif> Date of access: 29 Oct. 2017.
- Erwin, D.G. & Garman, A.N. 2010. Resistance to organizational change: linking research and practice. *Leadership & organizational development journal*, 31(1):39-56.

- Festinger, L. 1957. The theory of cognitive dissonance. Redwood City, CA: Stanford University.
- Field, A. 2009. Discovering statistics using SPSS. 3rd ed. London: Sage.
- Ford, J.D., Ford, L.W. & D'Amelio, A. 2008. Resistance to change: the rest of the story. *Academy of management review*, 33(2):362-377.
- Ganster, D. & Fusilier, M. 1989. Control in the workplace. (In Cooper, C & Robertson, I., eds. *International review of industrial and organizational psychology*, p. 235-280).
- Geisler, D. 2001. Bottom-feeders: people who reject change. *Executive excellence*, 18(12):19.
- Goodman, J. & Truss, C. 2004. The medium and the message: communicating effectively during a major change initiative. *Journal of change management*, 4(3):217-228.
- Gross, J.J. 2001. Emotion regulation in adulthood: timing is everything. *Current directions in psychological science*, 10:214-219.
- Harrison, R. 1970. Choosing the depth of an organizational intervention. *The journal of applied behavioral science*, 6:181-202.
- Hellgren, J., Sjöberg, A., & Sverke, M. 1997. Intention to quit: effects of job satisfaction and job perceptions. (In Avallone, F., Arnold, J. & de Witte, K., eds. *Feelings work in Europe* Milano: Guerini. p. 415-423).
- Holt, D.T., Armenakis, A.A., Feild, H.S. & Harris, S.G. 2007. Readiness for organizational change. *The journal of applied behavioral science*, 43(2):232.
- Hon, A.H.Y, Bloom, M. & Crant, J.M. 2014. Overcoming resistance to change and enhancing creative performance. *Journal of management*, 40(3):919-941.
- Hui, C. & Lee, C. 2000. Moderating effects of organization-based self-esteem on organizational uncertainty: employee response relationships. *Journal of management*, 26(2):215-232.
- Hultman, K. E. 2003. Managing resistance to change.  
[http://humanproof.com/files/Managing\\_Resistance\\_to\\_Change\\_Ken\\_Hultman\\_\(1\).pdf](http://humanproof.com/files/Managing_Resistance_to_Change_Ken_Hultman_(1).pdf) Date of access: 17 Nov. 2017.
- Huse, E.F. 1980. Organization development and change. St Paul, MN: West.

Ireland, R.D., Hoskisson, R.E. & Hitt, M.A. 2013. The management of strategy. Stamford, CT: Cengage Learning.

Jackson, S.E. 1983. Participation in decision making as a strategy for reducing job-related strain. *Journal of applied psychology*, 68(3):3-19.

Johnson, J.R., Bernhagen, M.J., Miller, V. & Allen, M. 1996. The role of communication in managing reductions in work force. *Journal of applied communication research*, 24:139-164.

Jones, G.R. & George, J.M. 2008. Contemporary management. 5th ed. McGraw-Hill/Irwin.

Judge, T.A., Thoresen, C.J., Pucik, V. & Welbourne, T.M. 1999. Managerial coping with organizational change: a dispositional perspective. *Journal of applied psychology*, 84:107-122.

Klein, S.M. 1996. A management communication strategy for change. *Journal of organizational change management*, 9(2):32-46.

Kotter, J.P. & Schlesinger, L.A. 2008. Choosing strategies for change. *Harvard business review*, Jul-Aug:130-139.

Kuhn, T. 2008. A communicative theory of the firm: developing an alternative perspective on intra-organisational power and stakeholder relationships. *Organization studies*, 29(08&09):1227-1254.

Kumari, N. & Afroz, N. 2013. The impact of affective commitment in employees' life satisfaction. *Global journal of management and business research interdisciplinary*, 13(7):24-30.

Lewin, K. 1947. Frontiers in group dynamics: concept, method and reality in social science; social equilibria and social change. *Human relations*, 1:5-41.

Lewin, K. 1951. Field theory in social science: selected theoretical papers. New York, NY: Harper.

Lines, R. 2004. Influence of participation in strategic change: resistance, organizational commitment and change goal achievement. *Journal of change management*, 4(3):193-215.

Lucas, E. 2002. Riding the change roller-coaster. *Professional manager*:27-29.

- Madsen, S.R., Miller, D. & John, C.R. 2005. Readiness for organizational change: do organizational commitment and social relationships in the workplace make a difference? *Human resource development quarterly*, 16(2):213-234.
- Marrow, A.J. 1969. *The practical theorist: the life and work of Kurt Lewin*. New York, NY: Teachers College.
- Mathieu, J.E. & Zajac, D.M. 1990. A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. *Psychological bulletin*, 108(2):171-194.
- Maurer, R. 1996. *Beyond the wall of resistance: Unconventional strategies that build support for change*. Austin, TX: Bard Books.
- McKay, K., Kuntz, J.R.C. & Näswall, K. 2013. The effect of affective commitment, communication and participation on resistance to change: the role of change readiness. *New Zealand journal of psychology*, 42(2):29-41.
- McLeod, S. 2008. Cognitive dissonance. <https://www.simplypsychology.org/cognitive-dissonance.html> Date of access: 12 Oct. 2017.
- McShane, S.L. & Von Glinow, M.A. 2010. *Organizational behavior. Emerging knowledge and practice for the real world*. 5th ed. New York: McGraw-Hill.
- Miller, V.D., Johnson, J.R. & Grau, J. 1994. Antecedents to willingness to participate in a planned organizational change. *Journal of applied communication research*, 22(1):59-80.
- Mumford, M.D., Baughman, W.A., Threlfall, K.V & Uhlman, C.E. 1993. Personality, adaptability, and performance: performance on well-defined problem-solving tasks. *Human performance*, 6:241-285.
- Nasser, M. 28 Apr. 2015. How you can apply force field analysis to achieve your goals. <https://www.linkedin.com/pulse/how-you-can-apply-force-field-analysis-achieve-your-goals-nasser> Date of access: 30 Oct. 2017.
- Nelson, A., Cooper, C.L., & Jackson, P.R. 1995. Uncertainty amidst change: the impact of privatization on employee job satisfaction and well-being. *Journal of occupational and organizational psychology*, 68:57-71.
- Nunnally, J. & Bernstein, I. 1994. *Psychometric theory*. 3rd ed. New York, NY: McGraw-Hill.

- Oreg, S. 2003. Resistance to change: developing an individual differences measure. *Journal of applied psychology*, 88(4):680-693.
- Oreg, S. 2006. Personality, context, and resistance to organizational change. *European journal of work and organizational psychology*, 15(1):73-101.
- Oreg, S., Vakola, M., Armenakis, A., Bozionelos, N. González, L., Hr̃ebí'c'kova', M., Kordac'ova', J., Mlac'ic', B., Feric' I., Topic, M.K., Saksvik, P.O., Bayazit, M., Arciniega, L., Barkauskiene, R., Fujimoto, Y., Han, J., Jimmieson, N., Mitsuhashi, H., Ohly, S., Hetland, H., Saksvik, I. & van Dam, K. 2008. Dispositional resistance to change: measurement equivalence and the link to personal values across 17 nations. *Journal of applied psychology*, 93(4):935-944.
- Oreg, S., Vakola, M. & Armenakis, A. 2011. Change recipients' reactions to organizational change: a 60-year review of quantitative studies. *The journal of applied behavioural science*, 47(4):461-524.
- Oreg, S. & Sverdlik, N. 2011. Ambivalence toward imposed change: the conflict between dispositional resistance to change and the orientation toward the change agent. *Journal of applied psychology*, 96(2):337-349.
- Paterson grading. [www.patersongrading.co.za](http://www.patersongrading.co.za) Date of access: 10 Nov. 2017.
- Peiperl, M. 2005. Resistance to change. *Organizational behaviour*, 2:348-349.
- Piderit, S.K. 2000. Rethinking resistance and recognizing ambivalence: a multidimensional view of attitudes toward an organizational change. *Academy of management review*, 25(4):783-794.
- Pollard, T.M. 2001. Changes in mental well-being, blood pressure and total cholesterol levels during workplace reorganization: the impact of uncertainty. *Work & stress*, 15(1):14-28.
- Reference. 2017. <https://www.reference.com/world-view/said-only-thing-constant-change-d50c0532e714e12b#> Date of access: 27 Mar. 2017.
- Richardson, P. & Denton, D.K. 1996. Communicating change. *Human resource management*, 35(2):203-216.
- Roberts, R.A. s.a. Success means change. *National research bureau*:9-11.

- Rouse, M. 2015. Change Management. <http://searchcio.techtarget.com/definition/change-management> Date of access: 28 Mar. 2017.
- Russell, A. 2017. Importance of change in an organization. Career trend. <https://careertrend.com/importance-change-organization-4297.html> Date of access: 30 Oct. 2017.
- Sagie, A., Elizur, D. & Koslowsky, M. 1995. Decision type, participative decision making (PDM), and organizational behaviour: an experimental simulation. *Human performance*, 8(2):81-94.
- Sagie, A. & Koslowsky, M. 1996. Decision type, organisational control, and acceptance of change: an integrative approach to participative decision making. *Applied psychology: an international review*, 45(1):85-92.
- Schmuck, R. & Miles, M. 1971. Organizational development in schools. Palo Alto, CA: National Press.
- Schweiger, D.M., DeNisi, A.S. 1991. Communication with employees following a merger. A longitudinal field experiment. *Academy of management journal*, 34(1):110-135.
- Self, D.R. 2007. Organizational change – overcoming resistance by creating readiness. *Development and learning in organizations: an international journal*, 21(5):11-13.
- Self, D.R. & Schraeder, M. 2009. Enhancing the success of organizational change: matching readiness strategies with sources of resistance. *Leadership & organization development journal*, 30(2):167-182.
- Sjöberg, A. & Sverke, M. 2000. The interactive effect of job involvement and organizational commitment on job turnover revisited: a note on the mediating role of turnover intention. *Scandinavian journal of psychology*, 41:247-252.
- Society for Human Resource Management. 2017. <https://www.shrm.org/> Date of access: 30 Oct. 2017.
- Struijs, P.C. 2012. Resistance to organisational change: the effect on job satisfaction and turnover intention and the moderating effect of emotion regulation strategies. Tilburg: Tilburg University. (Thesis – Masters).
- The free dictionary. 2017. Change. <http://www.thefreedictionary.com/change> Date of access: 28 Mar. 2017.

The Ux Consulting Company, LLC. 2017.

<https://www.uxc.com/p/prices/UxCPriceChart.aspx?chart=spot-u3o8-full> Date of access: 29 Oct. 2017.

Thomas, R. & Hardy, C. 2011. Reframing resistance to organizational change. *Scandinavian journal of management*, 27:322-331.

Thompson, A.A., Strickland, A.J., Gamble, J.E., Peteraf, M.A., Janes, A. & Sutton, C. 2013. *Crafting and executing strategy*. 20th ed. New York, NY: McGraw-Hill.

University of Wisconsin-Milwaukee. Center for urban transportation studies. Resistance to change. <https://www4.uwm.edu/cuts/bench/change.htm> Date of access: 30 Oct. 2017.

Van den Broeck, A., Vansteenkiste, M., De Witte, H., Soenens, B. & Lens, W. 2010. Capturing autonomy, competence, and relatedness at work: construction and initial validation of the work-related basic need satisfaction scale. *Journal of occupational and organizational psychology*, 83:981-1002.

Van Eeden, A., Sutherland, M. & Scheepers, C.B. 2016. An exploration of the perceived relationship between the level of power of stakeholder groups and their resistance to organisational change. *South African journal of labour relations*, 40(2):99-117.

Waddell, D. & Sohal, A. 1998. Resistance: a constructive tool for change management. *Management decision*, 36(8):543-548.

Wanberg, C.R. & Banas, J.T. 2000. Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of applied psychology*, 85(1):132.

Weekly U<sub>3</sub>O<sub>8</sub> spot price indicator. 2017. <http://www.tradetech.com/> Date of access: 29 Oct. 2017.

Welman, C., Kruger, F., & Mitchell, B. 2005. *Research methodology*. 3rd ed. South Africa, SA: Oxford University Press.

**ANNEXURE A:**

**RESISTANCE TO CHANGE QUESTIONNAIRE**

## **INFORMED CONSENT FORM**

### **Background:**

An MBA (Master of Business Administration) student is conducting this study in partial fulfilment of the MBA degree at North-West University School of Business and Governance. This research is designed to explore if resistance to change exists in the workplace, and if so, to what extent. Information obtained from the questionnaire and the research will be used for research purposes only.

### **Explanation of procedures:**

Please feel free to answer each question as honest as possible. There is no right nor wrong answer, as this study is to test perception from an individual's point of view. Rest assured, as no intentional risks nor harm is anticipated as a result of your participation. It will not take more than 15 minutes of your time to fill out this questionnaire. The information gathered during this project will, AT ALL TIMES, remain CONFIDENTIAL.

**Participation is voluntary and refusal to participate in this study will involve no penalty. Each participant is free to withdraw consent and discontinue participation at any given moment in time.**

### **Agreement:**

This agreement states that you have read and received a copy of this informed consent. Your participation by filling out this questionnaire indicates that you understand the parameters of your participation and agree to take part in this research study.

***YOU MAY KEEP THIS PAGE FOR YOUR RECORDS.***

***DO NOT SUBMIT THIS PAGE.***

## Questionnaire

Dear participant

Thank you for sparing your precious time to complete this questionnaire. It is being distributed to you purely for academic and research purposes.

Your unbiased choices will be highly appreciated and makes a valuable contribution to this research assignment.

Answers are ANONYMOUS.

The following information is needed to enable meaningful data analysis.  
We appreciate your help and time in providing this important information.

**Please mark the applicable block with a cross (X). Please complete ALL questions.**

**Section A:** Please answer the following questions

1	Gender	
	1. Male	2. Female

2	Age (years)				
	1. 18 - 25	2. 26 - 35	3. 36 - 45	4. 46 - 55	5. 56+

3	Race					
	1. Asian	2. Black African	3. Coloured	4. Indian	5. White	6. Other

4	Highest qualification obtained						
	1. Less than Matric	2. Grade 12 / Matric	3. Trade certificate	4. Diploma	5. B degree	6. Honours / Post grad diploma	7. PhD / Masters

5	Current level of employment (Patterson grade)							
	1. A-level	2. B-level	3. C-lower	4. C-upper	5. D-lower	6. D-upper	7. E-lower	8. E-upper+

6	How many years of work experience do you have in your current employment position?							
	1. 1 - 5	2. 6 - 10	3. 10 - 15	4. 16 - 20	5. 21 - 25	6. 25 - 30	7. 31 - 35	8. 36+

**Section B: Please answer the following questions**

*Do not answer questions 8 & 9 if the answer in question 7 was 'No'.*

7	<b>Are you a member of a union?</b>	
	1. Yes	2. No

8	<b>If yes in question 7, Which union are you a member of?</b>				
	1. AMCU	2. NUM	3. Solidarity	4. UASA	5. Other

9	<b>If yes in question 7, What role do you fulfill in this union?</b>	
	1. Member	
	2. Section steward	
	3. Plant committee	
	4. Women structure	
	5. Education structure	
	6. Skills & development structure	
	7. Health & safety structure	
	8. Branch committee	

**Section C: Please answer the following questions by indicating the degree to which you agree with each statement using the following 5-point scale, where:**

**1 = No, I strongly disagree**

**2 = No, I disagree**

**3 = Neutral**

**4 = Yes, I agree**

**5 = Yes, I completely agree**

		<i>Please pick a number which best describes your feeling towards each question</i>				
10	Do you understand your roles & responsibilities toward your job?	1	2	3	4	5
11	Do you feel competent in your job?	1	2	3	4	5
12	Do you master your tasks at your job?	1	2	3	4	5
13	Are you good at your job?	1	2	3	4	5
14	Do you feel in control while doing your normal day-to-day tasks?	1	2	3	4	5
15	Do you feel in control when you need to sort out a problem?	1	2	3	4	5
16	Do you depend on others to sort out problems in your area of responsibility?	1	2	3	4	5

**Section D:** Please answer the following questions by indicating the degree to which you agree with each statement by using the following 5-point scale, where:

**1 = No, I strongly disagree**

**2 = No, I disagree**

**3 = Neutral**

**4 = Yes, I agree**

**5 = Yes, I completely agree**

		<i>Please pick a number which best describes your feeling towards each question</i>				
17	Generally speaking, are you satisfied with your job?	1	2	3	4	5
18	In general, are you content with the job you have?	1	2	3	4	5
19	Do you enjoy being at work?	1	2	3	4	5
20	Do you feel that you could leave your job now?	1	2	3	4	5
21	Are you actively looking for other jobs?	1	2	3	4	5
22	Do you feel part of a team at work?	1	2	3	4	5
23	Do you feel part of a family at work?	1	2	3	4	5
24	Do you feel 'a sense of belonging' towards AGA?	1	2	3	4	5
25	Do you socialize with people at your workplace?	1	2	3	4	5
26	Are some of your colleagues close friends of yours?	1	2	3	4	5
27	Do you often feel alone when you are at work?	1	2	3	4	5
28	Do you feel that AGA's challenges are your own?	1	2	3	4	5
29	Do you enjoy discussing AGA with other people (non-AGA employees, etc?)	1	2	3	4	5
30	Does AGA have a great deal of personal meaning to you?	1	2	3	4	5
31	Would it be hard for you to leave AGA right now, even if you wanted to?	1	2	3	4	5
32	Would you quit your job if you did not have another job lined up?	1	2	3	4	5
33	Are you generally happy in the plant?	1	2	3	4	5
34	Do you feel safe at the plant?	1	2	3	4	5
35	Is the reason for you being at AGA due to financial constraints/obligations?	1	2	3	4	5
36	Is the reason for you being at AGA due to desire? (You want to be at AGA?)	1	2	3	4	5
37	Is the reason for you being at AGA due to convenience for you?	1	2	3	4	5

**Section E:** Please choose the best option for each of the following questions

38	Who, in your opinion, have the <b>MOST</b> say when making decisions which would influence the <u>processes on the plant</u> ?					
	1. Employees	2. Organised labour	3. Management	4. Senior Management	5. Directors	6. Shareholders

39	Who, in your opinion, have the <b>LEAST</b> say when making decisions which would influence the <u>processes on the plant</u> ?					
	1. Employees	2. Organised labour	3. Management	4. Senior Management	5. Directors	6. Shareholders

40	Who, in your opinion, have the <b>MOST</b> say when making decisions regarding strategies, finances, etc. <u>on plant level</u> ?					
	1. Employees	2. Organised labour	3. Management	4. Senior Management	5. Directors	6. Shareholders

41	Who, in your opinion, have the <b>LEAST</b> say when making decisions regarding strategies, finances, etc. <u>on plant level</u> ?					
	1. Employees	2. Organised labour	3. Management	4. Senior Management	5. Directors	6. Shareholders

42	Who, in your opinion, have the <b>MOST</b> say when making decisions <u>in AngloGold Ashanti for AngloGold Ashanti</u> ?					
	1. Employees	2. Organised labour	3. Management	4. Senior Management	5. Directors	6. Shareholders

43	Who, in your opinion, have the <b>LEAST</b> say when making decisions <u>in AngloGold Ashanti for AngloGold Ashanti</u> ?					
	1. Employees	2. Organised labour	3. Management	4. Senior Management	5. Directors	6. Shareholders

44	Do you have any input on revising processes, procedures and/or policies?			
	Never	Sometimes	Frequently	Always

Please answer the following question by indicating the degree to which you agree with each statement by using the following 5-point scale, where:

1 = No, I embrace change

2 = No, I do not mind change

3 = Neutral

4 = Yes, I am against change

5 = Yes, I am completely against change

		Please pick a number which best describes your feeling towards each question				
45	Are you, generally <b>AGAINST</b> change?	1	2	3	4	5

Please answer the following questions by indicating the degree to which you agree with each statement by using the following 5-point scale, where:

1 = No, I strongly disagree

2 = No, I disagree

3 = Neutral

4 = Yes, I agree

5 = Yes, I completely agree

		Please pick a number which best describes your feeling towards each question				
46	Do you feel that you have influence on any transformation/change that takes place in your workplace?	1	2	3	4	5
47	Do you have input on any decisions made within AGA?	1	2	3	4	5
48	Does change make you feel uncertain?	1	2	3	4	5
49	Does the idea of change make you feel negative about it?	1	2	3	4	5
50	Do you feel that your job is threatened when change is brought about in the workplace?	1	2	3	4	5
51	Do you feel that you will lose more than you will gain, when change is applied?	1	2	3	4	5
52	Do you believe that change is currently needed within AGA?	1	2	3	4	5

Please answer the following question

53	What would you change if you were the key decision maker?

**Section F:** Please answer the following question by indicating the degree to which you believe these groups are *willing or not willing to accept and implement change*, by using the following 5-point scale, where:

1 = *Not at all*

2 = *Not willing*

3 = *Neutral*

4 = *Willing*

5 = *Very willing*

		How <b>willing</b> are the following groups to accept and implement change? (Rate each group from 1 to 5)				
54		<i>Please pick a number which best describes your feeling towards each question</i>				
	Non-managerial employees	1	2	3	4	5
	Management employees	1	2	3	4	5
	Senior management employees	1	2	3	4	5

Please answer the following question by indicating the degree to which you believe these groups are *able or not able to manage and implement change*, using the following 5-point scale, where:

1 = *Not at all*

2 = *Not able to do it*

3 = *Neutral*

4 = *Able to do it*

5 = *Extremely able*

		How <b>capable</b> are the following groups to manage and implement change? (Rate each group from 1 to 5)				
55		<i>Please pick a number which best describes your feeling towards each question</i>				
	Non-managerial employees	1	2	3	4	5
	Management employees	1	2	3	4	5
	Senior management employees	1	2	3	4	5

Please answer the following question by indicating the degree to which you believe these groups are competent or not competent at all to plan, manage and implement change, using the following 5-point scale, where:

**1 = Not at all**

**2 = Not competent**

**3 = Neutral**

**4 = Competent**

**5 = Extremely competent**

		How <b>competent</b> are the following groups to plan, manage & implement change? (Rate each group from 1 to 5)				
56		<i>Please pick a number which best describes your feeling towards each question</i>				
	Non-managerial employees	1	2	3	4	5
	Management employees	1	2	3	4	5
	Senior management employees	1	2	3	4	5

**THANK YOU FOR YOUR HONESTY AND TIME...**

**ANNEXURE B:**

**LETTER FROM LANGUAGE EDITOR**

Saturday, 18 November 2017

To whom it may concern,

Re: Letter of confirmation of language editing

The dissertation *Resistance to change at a South African mining surface operation* by R Jacobs was language edited. The referencing and sources were checked as per NWU referencing guidelines. Final corrections remain the responsibility of the author.



Antoinette Bisschoff

Officially approved language editor of the NWU since 1998  
Member of SA Translators Institute (no. 100181)