

UNIVERSITY OF KWAZULU-NATAL

**Fostering employee innovation through engagement and skills development in the
manufacturing sector in Zimbabwe**

By

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**A thesis submitted in partial fulfilment of the requirements for the degree of
Doctor of Philosophy**

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2021

DECLARATION

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Malvern Waini Chiboiwa

13 January 2022

ACKNOWLEDGEMENTS

I would like to take this opportunity to acknowledge the following people who have contributed immensely to this thesis.

First and foremost, I would like to thank God Almighty, through whose grace I have been granted a sound intellect and am able to achieve what I have achieved today.

I would like to thank my supervisor Dr. Qwabe for his commitment and guidance in enabling me to complete this thesis submission. Without your wisdom and unfailing support completing the journey to this point would not have been possible.

My appreciation also goes to Mr. Simbarashe Kanengoni and Mr. Bothwell Mashura for their assistance and guidance in statistical analysis.

My sincere gratitude also goes to the UKZN administrative staff for their support throughout the whole PhD process. In particular, I would like to thank our Administration Officer for Higher Degrees and Research Ms. Deborah Cunynghame for her guidance on adherence with faculty regulations and processes.

I would also want to thank the organisations who took part in this research for granting me permission to collect data. Special mention goes to the participants involved for they volunteered their time and energy to participate in and to contribute to this study.

Special thanks also goes to my family particularly my wife, sisters and friends for their prayers and support in making this thesis submission possible.

DEDICATIONS

This thesis is dedicated to my lovely wife Bybit and children, Tinofara and Tinashe whose prayers and unwavering support have made this doctoral thesis journey possible. Also, to my mother and father for laying the foundation upon which this educational journey is built.

GLOSSARY OF ACRONYMS

Competence-Based Education and Training	CBET
Chartered Institute of Personnel Development	CIPD
Development Dimension International	DDI
Early Childhood Development	ECD
Education Development Board	EDB
Exploratory Factor Analysis	EFA
Financial Industry Competence Framework	FICF
Gallup Workplace Audit	GWA
Heritage Based Philosophy	HBP
Human Resource Development	HRD
Human Resource Management	HRM
Information and Communications Technology	ICT
Institute of Technical Education	ITE
Maslach Burnout Inventory - General Survey	MBI- GS
Modular Based Training	MBT
National Biotechnology Authority of Zimbabwe	NBAZ
National Council for Vocational Qualifications	NQVQ
National Critical Skills Audit	NCSA
National Training Awards	NTA
Perceived Supervisor Support	PSS
Perceived Organizational Support	POS
Precision Engineering Institute	PEI
Productivity Standard Board	PSB
Organisational Citizenship Behaviour	OCB
Organisation for Economic Co-operation and Development	OECD
Republic of South Africa	RSA
Research and Development	RD
Research Council of Zimbabwe	RCZ
Scientific and Industrial Research and Development Centre	SIRDC
Science, Technology, Engineering and Mathematics Project	STEM
SADC Qualifications Framework	SADC-QF
Southern African Development Community	SADC

Standards Development and Research Unit	SDERU
Structural Adjustment Programmes	SAP
Skills Development Fund	SDF
Social Exchange Theory	SET
Technical and Vocational Education and Training	TVET
Training and Development	T&D
United Kingdom	UK
United States of America	USA
Utrecht Work Engagement Scale	UWES
Zimbabwe Credit Accumulation and Transfer System	ZIMCATS
Zimbabwe Qualifications Framework	ZQF
Zimbabwe National Qualifications Framework	ZNQF
Zimbabwe Manpower Development Fund	Zimdef

ABSTRACT

The study focused on how employee engagement and skills development can influence employee innovation in the manufacturing sector in Zimbabwe. The study was guided by three theoretical perspectives namely the Social Exchange Theory, the Human Capital Theory and the Componential theory. The Social Exchange theory was adopted to explain employee engagement. The Human Capital theory, which emphasises investment in employees, was adopted to explain the concept of skills development whilst the Componential theory guided the concept of employee innovation. The study followed the positivist philosophical world view which provides the framework for the use of the quantitative research approach. The sample size of the study consisted of 335 participants comprising managerial and non managerial employees who were randomly selected. 200 participants responded to the questionnaires distributed by the researcher. The study adopted quantitative techniques of analysing data. Specifically, Structural equation modelling with confirmatory factor analysis was conducted to determine the relationships between the variable items and the variables themselves. The results of the structural equation modelling showed that there were significant relationships between the variable items and the variable factor. Multiple regression analysis was also performed to determine the impact of the independent (employee engagement and skills development) on the dependent variable (employee innovation). The multiple linear regression analysis indicated that employee engagement and skills development have a significant capacity to predict employee innovation with the resultant model explaining more than fifty per cent of the dependent variable. This, confirmed the viability of the proposed model of the study. Also, the Pearson Product Moment correlation method was used to explain the relationships between the research variables. The results of the Pearson's correlation analysis revealed that both employee engagement and skills development have moderate positive influence on employee innovation. These results of the study are significant in that they have theoretical and managerial implications. The findings represent a meaningful and incremental contribution towards existing literature on employee engagement, skills development and employee innovation by uprooting insights and showcasing the nature of the relationships amongst these variables. The results should assist management in the manufacturing sector in Zimbabwe on how they can improve employee innovation in their organisations.

Keywords: Employee engagement; Skills development; and Employee Innovation

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CHAPTER ONE

INTRODUCTION, BACKGROUND, PROBLEM STATEMENT AND OBJECTIVES OF THE STUDY

1.1 Chapter Introduction

The present business environment has become more turbulent and dynamic than ever before. The environment is becoming more competitive by the day and organisations have to be at their utmost best all the time. Over the past few years, employee engagement, skills development and employee innovation have developed into vital sources of competitive advantage in organisations. Saks & Gruman (2011) explain that organisations ought to change their focus to foster employee engagement as it is a significant variable for improving job performance. Commenting on the importance of skills development, Thiery, (2014) remarks that in order to be competitive and remain current, organisations are continually updating and upgrading their knowledge, skills and competencies to ensure efficiencies in processes and services. De Jager, Muller & Roodt, (2013) remark that organisations have no option but to innovate simply because problem-solving skills and innovative thinking and is significant for the survival of organisations in the twenty-first century.

However, not much has been written on the interplay between these constructs. This research therefore investigated how employee engagement and skills development impact on employee innovation particularly in Zimbabwe's manufacturing sector. The idea behind studying these constructs is to increase the body of knowledge in the field of Human Resource Management (HRM) and particularly with regard to their impact on policy and strategy.

The present chapter therefore presents the background, problem statement and significance of the study. In this chapter, specific objectives derived from the overall objective of the study are highlighted. In the same vein, research questions and hypothesis of the study are declared for the overall objective. The research assumptions, limitations and structure of the thesis are also discussed in this chapter.

1.2 Background of the study

The dynamic nature of today's corporate landscape is proving to be difficult for many organisations. Most successful organisations have succeeded because of effective people management. Effective people management is a crucial catalyst for competitive advantage.

Having employees with appropriate skill sets, shaping and inspiring them to operate as a collective group that performs well is essential for an organisation's ability to respond swiftly to market changes, innovate, and to achieve competitive advantage.

Employee engagement is considered necessary for organisations aiming to accomplish excellence through effective people management. Yu (2013) found that employee engagement has positive organisational consequences, including employee outcomes, organisational success and financial performance. Employee engagement refers to an employee's sense of purpose and focused energy seen by others in the display of effort, adaptability, persistence and initiative channeled towards achievement of organisational goals (Macey, Schneider, Barbera, & Young, 2009). Central to this definition is an individual's motivational state and general willingness to invest energy in the achievement of organisational goals and success.

Changes in the global economy and increased competition among organisations require organisations to update their skills continuously. Johanson & Adams (2002) argue that human capital (HC) is a critical input in determining the efficiency with which capital investment is utilised, and production is carried out. Therefore, the development of HC does not only lead to higher employee productivity, but it also facilitates the absorption of employees into the economy and their job mobility. Reducing skills bottlenecks significantly enhances the labour market.

Hameed & Waheed (2016) argued that developing the skills of employees is vital to organisations. Through it, employees feel valued and would want to contribute to the organisational goals. Esibanze (2016) concurs and argues that developing the skills of employees results in a competitive edge for an organisation and is achieved through employee quality, commitment, productivity and innovation.

Engaged employees with essential knowledge, skills and expertise, are important for organisations planning to achieve greater levels of business success (Ahmetoglu, Akhtar, Tsivrikos & Chamorro-Premuzic, 2018). In the contemporary challenging and competitive business landscape, learning and development (L&D) is key in maintaining engaged employees and in upholding that competitive advantage (Sigala, 2018).

Innovation has become an essential medium for business success; it is the thinking behind a business (Yun, Zhao, Park & Shi., 2020). No study discussed the combined relationship between innovation, employee engagement, and skills development. The efficacy of employee

engagement as a workplace attitude is paramount to the success of any organisation and coupled with positive skills development, the outcome is profound (Claypool, 2017).

One of the critical problems facing many organisations is how they can generate and foster innovation effectively as this is a vital ingredient to organisational successes. According to Linder, Jarvenpaa & Davenport (2003), innovation can be described as the quality that creates value using new ideas. Pearson (2002) maintains that competitive organisations continuously search for ways to transform every feature of their business and to translate those features into benefits that customers will value and act on. De Jager, Muller & Roodt (2013) argued that the challenge for many organisations that aspire to be extra innovative is how to release the potential and creativity of their employees to produce those thoughts that can be directed into innovative opportunities for business. The environment in which employees work plays a significant role in enhancing innovation. Enhancing employee skills in problem-solving is usually one of the most effective ways to ensure employees have the right problem-solving and innovative skills. De Jager *et al.*, (2013) highlight that organisations that create a supportive culture of innovation effectively always search for barriers to innovation and set interventions to address those barriers. Similarly, Amo (2005) claims that management contribution is vital in facilitating employee innovation by motivating them to involve themselves in innovative behaviour and by directing employee's innovation that is necessary for the organisation.

Zimbabwe is facing innovation challenges, particularly in the manufacturing sector. In surveys conducted by the Confederation of Zimbabwe Industries Manufacturing (CZI) (2012 & 2017), the investigations revealed that the industry was in crisis with capacity utilisation facing a downward spiral.

The depressed economy characterising the country and competition from foreign organisations with consumers preferring superior products from international rather than local brands has severely affected the industry (Damiyano, Muchabaiwa, Mushanyuri, & Chikomba, 2012). Similarly, Luwanika (2015) argues that Zimbabwe is in a precarious state where the industry needs to grow after being severely affected by deindustrialisation. That is organisations in the manufacturing sector are closing due to viability challenges and the influx of cheaper imports from abroad. Luwanika (2015) reminds us that conventional growth theory would propose that if the manufacturing industry in Zimbabwe is to progress it requires solutions to its diverse challenges such as natural strategic problems, fostering an empowering atmosphere

characterised by comprehensive policies and reliable economic and political institutions, and encouraging technology and innovation that moves the industry forward.

The CZI Manufacturing Sector Report (2017) alludes to the fact that organisations in Zimbabwe are struggling to survive the international economic setting due to increasing competition both on the import and export fronts. Production expenses in Zimbabwe are high because of old and obsolete equipment while at the same time there is increased competition through cheaper imports coming from countries that are producing efficiently. According to Kumar (2009), to meet the increased competition, the pressure then falls on organisations to improve their operational efficiency for improved competitiveness and total business performance, and the only possible way is through investing in employee innovation and technology.

Despite Zimbabwe boasting high literacy levels, the country is facing shortages of critical skills. According to Kuwaza (2017), Zimbabweans lack essential skills that steer business success. The Occupational Skills Survey Report (2017) revealed that such skills include lack of business acumen, financial literacy, innovation, research skills, critical thinking, business report writing skills, people management, numerical reasoning, business, etiquette and time management. The survey report found that 27 per cent of the employees who took part in the survey were highly competent in business acumen and research skills. Other essential skills such as critical thinking had 41%, financial literacy and innovation 30% each, business report writing 37%, time management 38% and people management 38%. These findings imply that Zimbabwe needs to invest in HC development in the identified skills for it to be efficient and for it to become competitive in the market.

The findings of the Occupational Skills Survey Report (2017) concur with Jaruzelski, Loehr, & Holman (2011) who argue that the work environment plays a significant role in influencing innovation capacity and they emphasise that management should be responsible for putting in place measures that foster a culture of employee innovation. It is, therefore, imperative to note that innovation does not come on its own. It comes at the hands of people within organisations. Jaruzelski, Loehr, & Holman (2011), and Morrison (2014) reiterate that employee engagement affects the level at which employees participate in instilling job innovation behaviour. People-related challenges of unskilled labour associated with the Zimbabwean industry have adverse effects on business. Developing employees is fundamental to an organisation's competitive advantage and long-term survival. Equipping employees with the right skills is vital in building

innovation capability that, in turn, results in increased performance and growth of the organisation (Skilbeck, 2017).

It is against this background, that this research sought to examine whether or not employee engagement and skills development yields will enhance employee innovation, which is imperative for organisational competitiveness and success.

1.3 Problem Statement

The macroeconomic indicators of Zimbabwe suggest that the country is set for challenging economic times. According to Chitiyo, Vines & Vandome (2016), the causes are numerous, including stagnation, deflation, and low productivity in industry, aggravated by weak regional currencies and low commodity prices. The challenges faced by Zimbabwe threaten the future of work in the country. Luwanika (2015) further argues that growth and domestic product (GDP) of the country point out low production levels in the manufacturing, agriculture and mining sectors, which forms the backbone of the economy. Faced with such a myriad of challenges, the Industrial Development Organisation (UNIDO, 2015) argues that with industrialisation lacking, growth in Zimbabwe is not likely to happen. Without technology and innovation, industrialisation may be difficult to attain.

Luwanika (2015) argues that employees in Zimbabwe's labour market possess limited innovation capacity. The manufacturing sector in the country is facing challenges in producing high-quality goods and services that can compete with international products (Damiyano et al., 2012). For instance, in the automotive industry, Zimbabwe has witnessed an increase in the number of motor vehicles being imported from Japan. Employee innovation could be contributing to these challenges and leveraging it could be the solution the industry is searching for. Lockwood (2007) argues that employee innovation has developed to be a significant cause of business success in the present-day competitive marketplace. Without innovation, leveraging the conditions necessary for sustainable development has been a challenge for many organisations. Thus, it is critical for businesses to prioritise innovation for their future success (Anderson, Potocnik, & Zhou, 2014).

Of importance, however, is the fact that employee innovation comes at the expense of proper people management. Investing in employees is an essential step in enhancing the competitiveness of organisations. Gallup (2015) argues that organisations that thrive on being innovative now appreciate that innovation is enhanced through employee engagement

characteristics such as possessing a strong work ethic, dependability and a positive attitude. Similarly, Sibanda, Ncube, & Muchena (2014) claim that an investment in employee engagement inducements may stimulate employees' productive behaviour and affect organisational performance. Similarly, Maku (2014) maintains that engagement fosters innovative practice where employees work together on how to improve the position of the organisation in the external environment.

Cooper (2001) argues that for organisations to bring in new market innovations continually, they will need to rely on the skills they have. The results of a survey conducted by CZI indicate that the skills possessed by employees in Zimbabwe are moderate related to their various industries (Damiyano *et al.*, 2012). Having skills not entirely matching what the industry is searching for may have negative implications for what is produced in that industry. Lau (2013) argues that having the right skills is extremely important for the performance of organisations. It is from this background that this study was undertaken to examine if employee engagement and skills development could enhance employee innovation, which is the desired factor for organisational success. The research objectives and research questions are presented next.

1.4 Research Objectives

Research objectives are specific statements indicating the main issues to be accomplished in a research study (Thomas & Hughes, 2010). In order to address the research problem(s), a study usually contains several specific objectives. The following primary and secondary objectives were formulated for this study:

1.4.1 Primary Objectives

- (i) The primary objective of the study was to investigate the influence of employee engagement and skills development on employee innovation in Zimbabwe's manufacturing sector organisations.

1.4.2 Secondary Objectives

To achieve the primary objective of the study, the following secondary objectives were identified as follow:

- (ii) To determine the factors influencing employee engagement in organisations in the manufacturing sector in Zimbabwe;
- (iii) To examine the factors influencing skills development of employees in the manufacturing sector in Zimbabwe;

- (iv) To determine the factors influencing employee innovation in the manufacturing sector organisations in Zimbabwe;
- (v) To examine the relationship between employee engagement and employee innovation in organisations in the manufacturing sector of Zimbabwe;
- (vi) To investigate the interplay between skills development and employee innovation in the manufacturing sector organisations in Zimbabwe; and
- (vii) To determine the influence of biographical profiles on employee engagement, skills development and employee innovation in manufacturing organisations in Zimbabwe.

1.5 Research Question

According to Bryman & Bell (2011), research questions provide guidelines on the kind of research design, the type of data to be collected, analysis and interpretation of results of the study to be investigated. Drawing from the research problem discussed and research objectives outlined above, the main research question and sub-questions of this study are:

1.5.1 Main Research Question

This research is informed by three different theories, namely the Social Exchange Theory, Human Capital Theory and The Componental Theory and therefore it is anchored in a conceptual framework leading to the following the research question:

- (i) To what extent can the integration of employee engagement and skills development lead to employee innovation in the manufacturing sector in Zimbabwe?

1.5.2 Sub –questions

Developed from the main research question, the sub-questions of this study were:

- (ii) What are the factors influencing employee engagement in the manufacturing sector in Zimbabwe?
- (iii) What are the factors impacting employee skills development in the manufacturing organisations in Zimbabwe?
- (iv) Which factors are influencing employee innovation in manufacturing organisations in Zimbabwe?
- (v) What is the effect of employee engagement on employee innovation amongst organisations in the manufacturing sector in Zimbabwe?
- (vi) What is the impact of skills development on employee innovation in the manufacturing sector organisations in Zimbabwe?

(vii)What influence do biographical profiles have on employee engagement, skills development and employee innovation in the manufacturing sector organisations in Zimbabwe?

The articulation of research questions is critical for any study. By answering research questions, researchers contribute new knowledge significant in addressing the problems the world is facing. The ensuing discussion focuses therefore on the possible contribution of this study to both the industry and to academia.

1.6 Significance/Contribution of the study

The preliminary literature review for this study indicates that most studies on predictors of employee innovation have done so from different perspectives. Studies have been conducted from the job attitudes end, for example, or from the view of employee engagement, while others have focused on job-related factors, for example, skills development. However, no studies in the sub-Saharan African context have attempted to research the predictors of employee innovation using two different frontiers at the same time with the idea behind this being to determine elements of employment and skills development, which must be integrated to promote effective innovation. This has practical implications for management in organisations. Also, the study sought to discover a model depicting existing relationships among the variables. Thus, from a theoretical standpoint, the study is expected to contribute to the body of knowledge in the field of HRM and general management by enhancing the understanding of the relationship between variables that predict employee innovation in organisations, both theoretically and practically.

While previous literature reviews provide a wealth of ideas on, employee engagement, skills development and employee innovation, it is imperative to note that the literature available is mainly for stable environments, particularly western society and it presumes behavioural likeness in the general application of the findings (Anitha, 2014; AbuKhalifeh & Som, 2013; Glasberg & Ouerghemi, 2011; Hoyrup, 2010; Khambule, 2013). In existing studies in higher performance work practices, the pertinent role played by the societal context is usually ignored (Bakar, 2013). As a result, behaviour of other emerging markets, particularly sub-Saharan Africa including Zimbabwe, is not really known. This study should, therefore, contribute to the general body of knowledge as it was conducted in a volatile environment in Zimbabwe.

Furthermore, research on employee engagement and skills development for employee innovation has ignored the effects of generational diversity that is found in most organisations.

Sarraf, Abzari Nasr Isfahani & Fathi (2017) argue that engagement levels in employees differ based on their age and inequalities exist in engagement levels between generations. For example, the source of employee engagement for a 30-year-old today is considerably different from the generation of their parents. In the context of developing countries, mainly sub-Saharan Africa, a limited number of studies have focused on the impact of generational diversity on skills development. In line with this reasoning, this will generate additional literature, understanding, insight and knowledge of the relationship among the three variables (employee engagement, skills development and employee innovation) of the study differently.

From a theoretical position, the study is expected to add to the field of HRM by enhancing the understanding of the relationship between variables that predict employee innovation in organisations. Grant & Osanlo (2014) argue that in quantitative studies, theoretical frameworks are often used to confirm associations between concepts, constructs or ideas. Three different theories guide this study: employee engagement informed by the Social Exchange theory; skills development guided by the Human Capital Theory; and employee innovation guided by The Componential Theory. This research sought to validate whether the integration of employee engagement and skills development will give rise to employee innovation or not.

1.7 Rationale for the study

The rationale for this study was to investigate the effects of employee engagement and skills development on employee innovation. Research has shown that employee innovation is a significant factor in achieving competitive advantage (Wallace, Butts & Johnson, 2016; Hoyrup, 2010). Literature has identified employee engagement and skills development as two key ingredients necessary for achieving organisational success. This study sought to determine if employee engagement and skills development may significantly and positively affect employee innovation. Employee innovation is a factor lacking in the manufacturing sector in Zimbabwe. Therefore, research focusing on how best to generate it is of the utmost importance to the country. Establishing a link between employee engagement, skills development, and employee innovation could be paramount for good management. They could put in place human resource practices that increase employee innovation, thus positively impacting the bottom line and competitive edge. Furthermore, lessons drawn from this research can be used in other sectors of the economy or countries where organisations may be trying to find solutions on how best they can improve innovation to survive. The rationale of the study was achieved by answering the identified research questions; therefore, researchers should have a deep understanding of how the study was be carried out.

The following section of the study provides a brief introduction of how the study was conducted. However, the study provided a detailed description of this section in Chapter 6.

1.8 Research design and methods

In this section, a brief discussion of how the research was carried out is presented. Discussed is the research design and methods employed to collect and analyse the data.

1.8.1 Research Design

Cresswell (2017) is of the view that the nature of the problem under study, the unfolding research objectives and the research questions lay the framework for using a particular research design. According to Terrell (2012), a research design is a roadmap that defines the most suitable route to follow when carrying out a study. A case study is an intensive description and analysis of a single unit or programme (Henning, 2004). The research questions for this study pointed to the adoption of a research case study. In this instance a case study of the manufacturing sector in Zimbabwe was used. Research subjects were drawn from manufacturing sector organisations ranging from agriculture, pharmaceuticals, automotive, construction, and food and beverages. This method was adopted to allow for a detailed and thorough investigation of a particular situation or aspect.

1.8.2 Research Strategy

This research employed a survey strategy. Creswell (2014) contends that a survey design provides a quantitative explanation of opinions, attitudes, or trends by researching a sample of that population. The survey strategy produces quantifiable or numerical answers for some features of the study population (Fowler, 2013). The survey method has many advantages. This method is easy to administer and can be used to study interactions between constructs that may be challenging to isolate experimentally, such as age, socioeconomic status, and wealth. The survey strategy also permits researchers to examine many facets of a population simultaneously and in the environment where they occur.

1.8.3 Research Approach

Denzin & Lincoln (2011) point out that researchers need to understand the various research approaches and their different functions. Each particular approach follows certain viewpoints that explain certain features of reality rather than others and produces particular research outcomes more suitable to some settings than to others. Therefore, researchers need to determine what the study purports to find out before following a specific research approach. The research design of a study can be quantitative or qualitative. Gramatikov & Barendrecht

(2010) argue that quantitative research techniques describe and explain different constructs. Quantitative research allows for systematic observations of the study objects, their properties and relationships. The application of quantitative analysis is, however, achieved through measurement. As a result of the measurement, different forms of quantitative data are collected and processed to respond to the study questions.

On the other hand, qualitative research is an interpretive, reflective, reflexive and descriptive effort to explain actual instances of research participants facing a particular situation (Fischer, 2011). According to Hair, Babin, Anderson & Tatham (2010), qualitative research design results are descriptive, prone to measurement error, difficult to quantify, and subject to being biased. Fischer (2011) further argues that validity in qualitative research is not determined by following experimental procedures and design or by using findings from significant statistics. Instead, the soundness of the study is found through appropriate selection of subjects, representation and analysis of results. Based on the facts represented above, this research was quantitative. The present research followed the quantitative approach for validity reasons.

1.8.4 Sampling

Cresswell (2014) states that a sample is obtained from the population under study and must represent the population from where it is obtained. Salkind (2012) claims that a target population consists of potential participants to a study where the researcher(s) want(s) to generalise the research findings. It is the total of all components that are likely to be selected in a sample to be studied. The target population comprised 2 550 employees who were permanently employed at the participating organisations selected for the study. The sample for this study was drawn from and comprised employees found in each of the participating organisations.

Previous studies offer researchers comparative and empirical standards upon which they can base their judgments. For researching purposes, previously used sample sizes by other researchers can be used as a guide on the sample size suitable for a study. Chipunza (2009) argues that the bigger the sample size, the lower the possibility of error in generalising findings to the population. To allow inferences from the population, a bigger sample size is required. A bigger sample size reduces the chances of sampling bias and subsequently inappropriate inferences. The sample size of this study consisted of 335 employees drawn from five different organisations in the manufacturing sector in Zimbabwe. Chapter 6 provides more details on how the sample size for this research was determined.

Sampling procedures are categorised into probability and non-probability sampling. The decision to select a sampling technique is dependent on the sampling procedure one chooses. This research used the probability sampling procedure. According to Salkind (2012), probability sampling techniques are widely used as the selection of respondents is determined by chance. Probability sampling techniques include systematic, random, cluster sampling and stratified random. From these techniques, stratified random sampling was employed for this research. This is a probability method under which the sampling frame is grouped into pertinent strata first (Saunders & Lewis, 2012). Random sampling or systematic sampling is then used to select respondents from each stratum. For this research, each organisation was regarded as a different stratum. Random sampling was then conducted in each stratum to select respondents.

1.8.5 Data collection instrument

Data were collected using questionnaires for this research. Questionnaires contain questions intended to obtain information suitable for analysis (Punch, 2011). Questionnaires were used since they distil the objectives of the study into specific questions which research subjects are asked. Also, questionnaires standardise the questions and response categories such that all the respondents respond to identical stimuli. For this research, closed-ended questions were used as they allowed the study participants to be asked the same questions and speed up the data analysis process.

A total of 334 self-administered questionnaires were distributed for this research. The researcher physically handed over some of the questionnaires to the research participants together with a pencil. Electronic questionnaires were also emailed to some respondents, especially to management employees who are not always available in the office. However, this was done after a telephonic booking with the respondents. The researcher also conducted follow-ups on the respondents to check whether they had completed the questionnaires or not. This was done to ensure a high response rate. The questionnaire had a total of 72 questions and was divided into four sections. Section A focused on demographics, section B on employee engagement, section C on skills development and section D on employee innovation. Section A consisted of 6 items measured using the nominal measuring scale. Section B, C and D were measured on a 5-point Likert scale, which is an interval scale. Section A having 6 items, Section B consisting of 17, Section C consisting of 25 items and Section D consisting of 24 items.

1.8.6 Measuring Instrument

According to Gramatikov & Barendrecht (2010), a measuring unit refers to a series of possible responses that a questionnaire offers to research subjects. A measurement unit could significantly limit or otherwise increase the analysis of the data collected. This research made use of the Likert scale. The scale consists of a five-point verbal scale stretching from positively expressed responses to negatively assessed responses on both sides of the scale, depending on the nature of the question. For instance, (1) very unlikely to (5) very likely or (1) strongly disagree to (5) strongly agree. According to Kumar (2005), the scale assumes that each item or statement has equal attitudinal value, weight or importance when reflecting attitudes towards the issued questions. The study also incorporated questions on employee demographics such as gender, age, marital status etc.

1.8.7 Reliability and validity of measurement scales

A measuring instrument is reliable and valid when it produces the same results when the test is reapplied and whether or not the instrument has the capability to fulfil its purpose. Before using the questionnaire, a pilot study was conducted. A pilot study ensures that the questionnaire is refined so that research subjects will not have challenges answering the questions.

Furthermore, Factor Analysis (FA) was conducted to assess the internal consistency of the research constructs, while the Cronbach Alpha Coefficient test was used to measure the reliability of the measurement scale. Principal Component Factor Analysis with variation was used to put data into interpretable factors. Discriminant and convergent validity of the study variables was determined by testing the relationships between the study variables.

1.8.8 Data Analysis

The research used quantitative techniques of data analysis. Specifically, inferential statistics were used for testing the non-parametric data that described the relationship between observation and theory of two or more independent variables. The study used Structural Equation Modelling (SEM) to test the significance of the association between the model's variables. Confirmatory factor analysis investigates if the researchers understanding of the nature of a construct is in line with measures of that construct or not. Therefore, the objective of CFA was to examine if the data would fit a hypothesised measurement model. The bivariate correlation method was used to specify the association or absence between the study variables,

in this case it was the connections between employee engagement, skills development, and innovation.

1.9 Ethical considerations

When conducting research, ethical considerations are important. Ethical considerations distinguish between what is right and wrong when designing and conducting a research project. For this study, the researcher obtained letters granting permission to carry out the research. The researcher got ethical clearance (EC) letters from the University of KwaZulu-Natal (UKZN). Furthermore, permission letters were obtained from the respective organisations, where data collection for the study was undertaken. Before conducting the research, the researcher sought informed consent from the participants of the study. This involved informing the participants about their rights to participate or to withdraw from the study at any moment, the purpose of the study, the steps taken in conducting the study and the benefits of being involved in the study. Informed consent provides respondents to a study with sufficient information to make an informed decision on whether to undertake voluntary participation in a study or not. The completed questionnaire used in the study was submitted anonymously. This was done to maintain the confidentiality of the respondents.

1.10 Limitations of the study

No study had been done in the Sub-Saharan African context on the association between employee engagement, skills development and employee innovation. However, previous research forms the basis of a literature review and provides a basis for understanding the research problem. Additionally, financial constraints made it challenging to conduct the study in sub-branches of the organisations under study as they were spread across Zimbabwe and the research had to operate within the budget. Also, the population of the study was limited to organisations in Harare province only. However, this decision did not mean that the provinces excluded were not important for the study but they were not essential.

1.11 Outline of the thesis

The study comprised eight chapters. Below is an outline of the chapters in the study:

Chapter one presented the background to the study, the problem statement, the research questions and the objectives of the study to provide the research with the required focus. In addition, the chapter discussed the contribution of the study and the research assumptions. A summary of the whole chapter is provided at the end of the chapter.

Chapter two reviews literature on employee engagement. In this chapter, an historical evolution and meaning of employee engagement is discussed. The chapter also discusses the factors that influence employee engagement before looking at the consequences of the concept. Measuring instruments used to measure employee engagement are described and the state of employee engagement in Zimbabwe is also examined in this chapter.

Chapter three concentrates on the concept of skills development. The chapter discusses the meaning of skills development, the global overview of the concept, skills development in Zimbabwe, factors influencing the concept and the benefits of the concept.

Chapter four focuses on the concept of employee innovation. In the chapter, the meaning of employee innovation is explored. Factors that influence employee innovation are discussed. The state of employee innovation in Zimbabwe is also discussed before provision of concluding remarks.

Chapter five discussed the theoretical perspectives guiding the research variables of the study. In the chapter the Social Exchange Theory is discussed to explain employee engagement whilst the Human Capital Theory and Componential Theory of creativity are discussed to explain the concepts of skills development and employee innovation. The chapter provides the justification for the use of each theory and the limitations for each theory.

Chapter six explains the research design and methodology of the study. In the chapter the research population, sampling technique, procedure for data collection, reliability and validity of the research instrument, the data analysis procedure and ethical implications are discussed.

Chapter seven presents and discusses the findings of the study. In this chapter, research propositions are tested. The findings from the tests performed are analysed and discussed pursuant to the research propositions and literature related to the study.

Chapter eight provides a summary of the study. Included in this chapter is a summary of the chapters and study findings. Theoretical and empirical contributions are also explored. The chapter also discuss the practical and managerial implications related to the study. Limitations of the study are also discussed and suggestions for future research are given.

1.12 Definition of key terms

Table 1.1 presents the definitions of keys terms used in the study.

Table 1.1: Definition of key terms

Key term	Definitions and sources
1. Competitive advantage	It is the above average performance of an organisation's performance in comparison to its competitors. This involves above average industry neutralisation of completion and exploitation of market opportunities (Yeng & Perlis 2018).
2. Employee engagement	Employee engagement is defined as a fulfilling a positive work-related state of mind that is characterised by dedication, vigour and absorption (Schaufeli, Martínez, Marques, Salanova, & Bakker, 2002).
3. Skills development	It involves acquiring attitudes, know-how and practical competencies, necessary to perform an occupation or trade in the labour market (European Commission, 2012)
4. Employee innovation	It is behaviour related to the development of new products, the development of new markets, or improvement of business routines within organisations (Amo, 2005)

1.13 Chapter Summary

This chapter provided a general outline of the study variables. The chapter discussed the research problem, specified the research objectives and questions in order to provide the study with the required focus and guide. Also discussed in the chapter was how the study contributes to both academia and industry. A layout of the chapters in the study is also presented. The next chapter will review the three theoretical perspectives guiding the research variables of the study.

CHAPTER TWO

A REVIEW OF LITERATURE RELATED TO THE CONCEPT OF EMPLOYEE ENGAGEMENT

2.1 Chapter Introduction

The previous chapter provided a background to the study. The chapter outlined the research objectives, questions, contribution and rationale. This chapter reviews the literature and attempts to lay out an understanding of employee engagement, and further identifies gaps in the existing body of knowledge on employee engagement. The chapter commences by focusing on the evolution and meaning of employee engagement. Different scholarly perspectives on the meaning of engagement are discussed in the chapter. Furthermore, the chapter presents the antecedents of employee engagement and it is measured. Subsequently, a discussion of employee engagement and the consequences thereof will be presented. Finally, a concluding summary of the whole chapter is given.

2.2 Evolution and Meaning of Employee Engagement

The concept of employee engagement has received considerable attention in the HRM field. Kahn (1990: 694) introduced the notion of employee engagement and described it as “the harnessing of organisational members selves to their work roles where people express themselves physically, emotionally and cognitively when performing their duties” This definition suggests that for one to be engaged with his/her work she/he has to be committed emotionally, physically and cognitively to his/her work (Ferrer, 2010). Thus, engaged employees are those who have a psychological connection with their job and organisation, and who exhibit their preferred self in the conduct of their duties. Similarly, Bakar (2013) contends that being at work requires a particular cognitive state, and for employees to display engagement, they have to think and feel in a certain manner which their jobs must provide. Kahn (1992) argued that when employees are engaged with their work, their mental presence is said to increase. Such employees exhibit greater participation and involvement in their jobs and in what happens around the organisation.

Maslach & Leiter (1997) reconceptualised the concept of employee engagement to refer to a state of energetic involvement that is contrary to burnout. In other words, employees who are not engaged experience burnout. Nevertheless, engaged employees take their duties seriously and display energetic behaviour (Bakker, Schaufeli, Leiter & Taris, 2008).

According to Ababneh (2015) the work by Maslach & Leiter (1997) on engagement took two different but linked paths. Firstly, they took engagement as the opposite of burnout denoting ineffectiveness, exhaustion and cynicism. Ababneh (2015) suggests that when employees experience low levels of exhaustion and cynicism it suggests higher levels of involvement and energy. On the other hand, when employees are engaged they experience high efficacy which manifests itself in high energy levels and involvement (Baker, 2013). Accordingly, Maslach & Leiter (1997) defined engagement as being characterised by high energy levels, immersion and efficacy.

Schaufeli, Martínez, Marques, Salanova, & Bakker, (2002) introduced another perspective. They did not agree with the idea of viewing absorption as the direct opposite of reduced efficacy or burnout. They assert that it is not essential for individuals to experience energy when they feel exhausted. Schaufeli *et al.*, (2002: 465) regarded burnout and engagement as two different concepts that are independent of each other. They, therefore, conceptualised engagement as “fulfilling a constructive job-related state of mind that is characterised by vigour, dedication, and absorption.” Wollard & Shuck (2011) state that dedication is characterised by pride, significance eagerness and inspiration. Vigour connotes a person’s emotional commitment with high energy levels when performing tasks, the need to display extra energy in their work and showing persistence during challenges (Firouznia, Hosseini & Karamabad, 2021). Absorption denotes how fully engrossed an individual is when performing a task (Jeve, Oppenheimer & Konje (2015). Schaufeli *et al.*, (2002) conceptualisation of employee engagement suggests that engaged employees are closely connected to their work activities. Thus, engagement depicts a favourable representation of the workplace environment.

Harter, Schimdt & Hayes (2002) argue that engagement involves one’s involvement, enthusiasm, and satisfaction with work. Their definition of employee engagement was adopted from items on a measuring scale of employee perceptions of work characteristics developed by the Gallup organisation in 1999. The definition offered by Harter *et al.*, (2002) had conceptual similarities with job satisfaction and job involvement. They adopted the Gallup Workplace Audit measuring scale; a modern satisfaction scale that explains the working conditions alleged to indicate engagement rather measuring engagement as a psychological state (Schaufeli & Bakker, 2010). However, this added confusion to the definition of engagement, whether it is work practice or a mental state (Harter *et al.*, 2002 & Kahn 1990). Also, the conceptualisation of employee engagement by Harter *et al.*, (2002) mainly focuses on enthusiasm about work. Bakar (2013) contends that being engaged does not necessarily require a sense of enthusiasm

and significance at work. This could have been due to the fact that the definition relied heavily on perceptions of work characteristics. As such Bakar (2013) maintains that this definition is insufficient as satisfaction and involvement may be antecedents of engagement and not the concept itself.

Ababneh (2015) states that Saks (2006: 602) provided a connection between professional literature and earlier theories of engagement in academia by describing engagement as “a unique but distinct concept consisting of cognitive, emotional, behavioural and cognitive components that are linked to individual task performance.” Saks (2006) contends that the degree of engagement in employees differs based on the job resources they obtain from the organisation. Furthermore, Saks (2006) differentiated between job engagement and organisational engagement. Job engagement refers to one’s psychological presence in their work roles whilst organisational engagement denotes one’s psychological presents towards a performance that enhances the achievement of organisational goals and growth. While, Saks’ (2006) definition brings in a new dimension to employee engagement, conceptualising the definition into two distinct but linked concepts, it increases the uncertainty surrounding the definition of employee engagement.

Macey & Scheider (2008: 5) argued that engagement is multidimensional with three different features which are behavioural engagement, state engagement and trait engagement. Behavioural engagement refers to “adaptive behaviour intended to serve individual and organisational purposes, whether to defend or protect the status quo in response to actual or potential threats/ or to change and or/ promote change in response to actual or anticipated events.” State engagement concerned with attitudinal constructs of satisfaction, involvement, commitment and empowerment. State engagement is regarded as a number of facets that result in behavioural engagement (Ababneh, 2015). Macey & Scheider (2008) defined trait engagement as trying to experience the world from a specific vantage point. Describing trait engagement, they further argued that certain individuals possess certain characteristics that permit them to be highly engaged. The separation by Macey & Scheider (2008) of employee engagement into three different but related constructs was also widely criticised by scholars (Newman & Harrison 2008; Dalal, Brummel, Wee, Thomas 2008 & Newman & Harris 2011). These scholars argued that having three different but related constructs to explain employee engagement added more ambiguity to engagement than less. Thus, it becomes challenging to separate the determinants and consequences of the construct. For instance, trait engagement

should be viewed as a dispositional antecedent whereas behavioural engagement is better regarded as resulting from employee engagement (Ababneh, 2015).

Wefald & Downey (2009a) define employee engagement as vigour. They argued that to consider engagement in employees as a different construct only vigour should be measured. Vigour describes a person's emotional resilience and significant levels of vitality in task performance. Baker (2013) argues that this definition denotes an emotional state that employees attribute to their work. Vigour, therefore, represents the amount of energy invested by an individual at work. However, this definition does not capture an individual behavioural attribute at work such as dedication. As such, the definition does not cover the whole concept of employee engagement as it only uses one aspect. Therefore, in this study, the definition by Wefald & Downey (2009a) will not be adopted as it does not provide a holistic approach to the explanation of the meaning of engagement.

Many other definitions were later coined to explain the concept of employee engagement. Shanmugan & Krishnaveni (2012) explained the concept as employees who put in extra effort and dedicate their role performance to assist in the achievement of organisational objectives. Likewise, Witemeyer, Ellen & Straub (2013) define employee engagement as self-psychological, vigour, absorption, dedication, empowerment, and motivation to assist in the achievement of the organisation's goals. Furthermore, Schaufeli & Taris (2014) called for a broader explanation of the term to include the behaviour engaged employees display while determined to attain organisational objectives. Relatedly, Sharma & Kaur (2014) define engagement as the degree to which an individual develops a sense of mental investment in their work so that they become intellectually and behaviourally absorbed in achieving organisational goals.

Having discussed several employee engagement conceptualisations, there seems to be a lack of agreement between scholars on the actual definition of employee engagement. Scholars have conceptualised employee engagement as being present at work. Others have looked at it from a burnout perspective. Others viewed it from a standpoint where engagement overlapped with other concepts like job satisfaction and involvement. The ambiguity concerning the conceptualisation of the phrase 'employee engagement' has prompted this research to adopt the definition by Schaufeli *et al.*, (2002: 465) as "fulfilling a positive work-related state of mind that is characterised by dedication, vigour and absorption." Baker (2013) contends that the definition of engagement by Schaufeli *et al.*, (2002) is more precise and thorough because it

focuses on engagement being a positive and satisfying aspect of doing work. As such, for employees to be engaged they must be dedicated, vigorous and absorbed in their work. Further, Baker (2013) argues that the positive and satisfying aspect explains how individuals flourish at work.

Also, the present research will adopt the definition by Schaufeli *et al.*, (2002) because it is the widely used and cited definition of employee engagement by scholars (Menguc, Auh, Fisher & Haddad 2013; Salanova, Agut & Peiró 2005; Wollard & Shuck, 2011).

2.3 Factors Influencing Employee Engagement

Several antecedents have been attributed to the concept of employee engagement. The antecedents are those circumstances, strategies or constructs that pave the way for the development of employee engagement. Researchers have classified employee engagement antecedents into individual and organisational antecedents (Wollard & Shuck, 2011). Individual antecedents are directly aligned to an individual and his/her personal development whereas, organisational antecedents are strategies or constructs applied in the organisation to assist in the cultivation of engagement and development of every employee in the organisation (Wollard & Shuck, 2011).

In line with the above claims, the current research adopts the classification of employee engagement antecedents. The literature on individual employee antecedents such as absorption, perceived organisational and supervisor support, work-life balance and autonomy will be reviewed in this section of the study followed by organisational level antecedents such as supportive provision of adequate job resources, supportive organisational culture, job control, communication, leadership, person-job fit and person organisational fit and employee recognition and rewards, job control

2.3.1 Individual employee work engagement antecedents

Employee engagement is a concept with many antecedents. These antecedents may be at the individual or at the organisational level. The next section of the literature review discusses the individual level antecedents of employee engagement.

2.3.1.1 Absorption

Absorption is an antecedent of employee engagement (Harris, 2018; Schaufeli et al., 2002). Absorption refers to how employees are entirely engrossed in or attached to their work while overlooking their surroundings and at the same time losing track of time (Harris, 2018). Absorption occurs when employees experience higher levels of intensity in their work. Harris (2018) extends that claim when he says that when employees have delight in their work, it generates opportunities for them to experience greater levels of absorption. Blau (2008) also contends that challenging work can make individuals fully absorbed in their work and can drive them to their limits to achieve their goals or to complete their given tasks. Furthermore, when employees experience absorption, they are engaged, energetic and have an effective relationship with their job activities. They also view themselves as being able to solve the demands of their work (Schaufeli, 2017).

Van Beek, Taris, & Schaufeli, (2011) argue that engaged employees find their work, interesting, enjoyable and satisfying. They display intrinsic motivation which encourages them to engage in work and display a sense of volition. Lee, Reeve, Xue & Xiong (2012) note that intrinsic motivation happens when one goes through a psychological process that stems from innate feelings for activities where an individual goes through an intense psychological process that stems from inherent feelings. In other words, it is motivation that comes from one's state of mind. Furthermore, Van Beek, Hu, Schaufeli, Taris & Schreurs, (2012) contend that engaged employees value their work activities and have internalised their work goals mentally. They also put a considerable amount of time into working on these work activities. This also explains why they are always happily absorbed in their work. This positive nature of absorption also explains why employee engagement is associated with different positive outcomes, thus, also amplifying why engaged employees craft their work in ways that result in increased resourcefulness, paving the way for improved performance (Bakker, Albrecht, & Leiter, 2011). This positive nature also explains why the present research assumes that employee engagement will lead to employee innovation; a positive outcome imperative for business success.

2.3.1.2 Dedication

Researchers concur that employee dedication influences employee engagement (Rayton & Yalabik, 2014; Song, Kolb, Lee, & Kim, 2012; Mills & Konya, 2019). According to Song *et al.*, (2012) employee dedication involves individuals having pride, deriving significance and feeling challenged and inspired by their work. In agreement, Yalabik *et al.*, (2014) noted that employee dedication involves employees being highly involved in their work, feeling inspired

and enthusiastic about their jobs. Saks (2006) highlights that employees who display dedicated behaviour have a high task connection and are more likely to exhibit mental absorption and attentiveness in their work.

Yalabik *et al.*, (2014) maintain that employee dedication is an important element of employee engagement which every organisation should strive for. Mills & Konya (2019) argue that employees who are dedicated are supportive and understand the values of the organisation. Their behaviour goes beyond protecting the values of the organisation by defending the corporate image. Czarnowsky, (2008) points out that organisations should cultivate employee dedication as there is a direct linkage between it and positive organisational consequences like employee engagement and profitability.

Gill & Mathur (2007) argue that when an organisation does not have employees who are dedicated it is likely to face a lot of problems. They argue that when an organisation lacks dedicated employees it is likely to face high levels of employee turnover which in turn leads to high labour costs, lack of pro-social behaviour which impacts negatively of the quality of goods and services produced thus impacting negatively on the organisation's bottom line. Jaya & Ariyanto (2021) share this view and highlight that the attainment of organisational objectives is influenced highly by employee motivation when they are performing their tasks. Thus, employee motivation to achieve their tasks is found within dedication which encourages them to act purposefully in supporting the interests of the organisation.

Research also found that employee dedication is an indispensable aspect of employee engagement. In a study in the Nigerian marine sector on employee dedication and performance, Mills & Konya, (2019) concluded that employee dedication is necessary for engagement behaviour required for improved and sustained performance. In another study on training, engagement prompting employee performance in the Ugandan health sector the results proved that employee dedication is an important component of employee engagement. Employee dedication significantly and positively influenced employee performance ($r = .438^{**}$, $p < .05$) (Sendawula, Kimuli, Bananuka & Muganga, 2018).

2.3.1.3 Vigour

Vigour is a key concept significant for employee engagement. According to Shirom (2011) vigour denotes the affective element of an employee energy reservoir comprising three interrelated affective resources. These three resources consist of physical strength, emotional energy and cognitive liveliness. Physical strength focuses on one's physical abilities; emotional

energy looks at the empathy and sympathy shown by an individual to others; and cognitive liveliness denotes mental agility. Shirom (2011) explanation suggests that vigour appears to be a combination of different facets. In the same context, Kodden & Hupkes (2019) express that vigour is an amalgamation of motivation and energy ensuring sustainable employability of individuals by influencing the level at which mental and physical requirements of an individual's job are met. Other researchers concur that vigour is a significant contributor of employee motivational processes (Watanabe, Otsuka, Inoue, Sakurai, Ui & Nakata, 2016). They argue that displaying vigour shows informational value about how appealing work goals are and could trigger individuals to achieve those goals. Thus, having a feeling of achieving the work goals may enhance one's motivation and engagement in the job.

Vigour is a valid way to describe engagement (Little, Nelson & Wallace, 2011). When employees seem energetic, peppy and engrossed they are likely engaged. Robinson (2018) asserts that vigour describes pre-emptive and engagement behaviour in individuals. Employees with high levels of vigour have the willingness to work and possess extra energy to go beyond their call of duty. The chief component in vigour is the energy level one put forth in his work (Robinson, 2018). Watanabe et al. (2016) note that vigour has positive workplace behavioural outcomes. They highlight that it is associated with in-role and extra-role outcomes such as job performance and employee voice. Vigour is found to be the main catalyst for individuals' enhanced tasks and overall performance. When employees feel vigorous, they develop positive energy, become motivated, and become engaged when performing their tasks (Shirom, 2007; Carmeli & Gittel, 2009). In addition, vigour stimulates employees to be engrossed with their environment and participate in tasks that produce pleasurable consequences (Kodden & Groenvelde, 2019). Vigorous employees have the cognitive energy, physical strength and emotional drive to actively participate in actions that assist others, pay attention to others, provide notice if going to be absent, and not involve themselves in unjustifiable breaks. Vigour permits employees to develop social associations in different work situations, thus enhancing engagement and pro-social behaviour in the workplace.

Also, researchers point out that vigour is linked with positive outcomes like task, citizenship and innovative behaviour. (Lam, Wan, & Roussin, 2016; Carmeli *et al.*, 2009). When employees feel energetic and have more interest in their jobs, it helps elicit positive energy that compels them to work beyond obstacles. Shirom (2011) states that notable performance from employees emanates from their level of awareness to do their duties. In the form of mental resilience and high energy levels, Vigour demonstrates effort and determination even in

challenges. Thus, vigour is an essential element needed by employees for high organisational achievements.

2.3.1.4 Work-life balance

Work-life balance is a factor in employee engagement (Wasay, 2013; Znidarsic, Vukovic & Maric, 2020). The routine life of every person employed is divided between the time one spends when at work and time spent with family and friends outside the work environment. Work-life balance is viewed as an equilibrium between work-life and personal life (Iqbal, Zia-ud-Din, Arif, Raza & Ishtiaq, 2017). Explaining the association between work-life balance and employee engagement, Benito-Osorio, Muñoz-Aguado & Villar, (2015) argued that a balance in work-life increases employee engagement. Expanding on the work-life balance and engagement relationship, Anitha (2014) argues that organisational initiatives that facilitate a healthy work-home balance assist its workers in upholding high employee engagement. Researchers claim that the SET explains the connection between work-life balance and employee engagement (Blau in Slack, Corlett, & Morris, 2014).

The principle of reciprocity emphasised in the SET is core in work-life balance and employee engagement relationship with those organisations that avail opportunities to their employees and employees reciprocate with desired behaviour and attitudes which benefit the organisation. The application of the SET sets in when employees feel that the organisation assists them to balance their personal life with their work life. As such, employees would feel valued and reciprocate with better behaviour and attitudes (Larasati, Hasanati & Istiqomah, 2018). When employees are presented with opportunities and given attention by their organisations they will have positive feelings and thereby reciprocate with a suitable level of employee engagement (Saks 2006; Aryee, Srinivas, & Tan, 2005)

Studies have been performed to confirm the relationship between work-life balance and engagement. For instance, Schieman & Glavin (2017) confirmed that engagement levels increased when there is a reduced conflict between home and work activities. Similarly, Schilling (2014) conducted a study on *'The relationship between job engagement, work interference with personal life, and turnover intentions'* and observed that work-life balance practices are positively associated with sub-scales of engagement. Furthermore, researchers confirm that the balance between work-life and employee engagement can yield positive outcomes for the organisations. For instance, Shankar & Bhatnagar (2010) argue that work-life balance is important for leveraging both individual and organisational effectiveness. Work-life

balance benefits the organisation in many ways. For instance, it leads to improved job performance, increased job satisfaction, reduced absenteeism and employment turnover and increased organisational performance. Also, Benito-Osario *et al.*, (2015) believe that a balanced work-life results in productive innovation, engaged employees and employee talent retention. Thus, all these aspects result in positive outcomes that improve the individual's and the organisation's performance.

2.3.1.5 Perceived Organisational Support

The relationship between perceived organisational support (POS) and employee engagement requires further attention (Eisenberger & Stinglhamber, 2011). Perceived organisational support reflects the overall expectations of an organisation's employees in respect of their value and contribution to it in a subjective way (Dai & Qin, 2016). The notion of POS draws its roots from the organisational support theory which highlights the assessment employees make comparing the extent of the levels at which their employers value their wellbeing and contributions (Eisenberger, Huntington, Hutchison & Sowa, 1986). The SET which stresses the principle of reciprocity provides a theoretical foundation for the relationship between organisational support and engagement. As discussed earlier, the SET believes that POS by employees will make them reciprocate the gesture by being emotionally attached to the organisation and also by applying themselves more effectively in their work activities (Alvi, Abbasi & Rizwan Haider, 2014). According to Dai & Qin (2016) when employees perceive support from their organisations that is when they start showing active behaviour and a positive attitude towards making changes to the accomplishment of organisational goals. As such, organisations that warrant POS in their employees are alleged to benefit from competitive advantage over others especially those who do not encourage attachment in their employees.

Organisational support researchers argued that POS is fortified when employees experience conducive working conditions and consider the conditions to be directly enhanced by the thought that the organisation voluntarily decided to provide these conditions, not as a result of legal compliance (Eisenberger *et al.*, 1986; Eisenberger *et al.*, 1997). In this regard, the relationship between POS and conducive work experiences will be strong when employees perceive that the conducive environment is credited to discretionary efforts made by the organisation (Rhoades, Eisenberger & Armeli, 2001). Furthermore, POS depends on how employees personify the organisation. Research has revealed that perceptions of organisational support by employees will increase or reduce based human like characteristics they attach to the organisation (Eisenberger *et al.*, 1986; Shanock & Eisenberger, 2006). For instance, the

culture of an organisation or its work environment embodies the organisation in a way through which employees develop an understanding of the acceptable language and behaviour. Consequently, when employees develop an understanding of their culture and work environment they will develop a strong sense of attachment to the organisation.

2.3.1.6 Perceived Supervisor Support (PSS)

Employee engagement has been described as a major outcome of perceived supervisor support (PSS) (Dabke & Patole, 2014; Saks, 2006). Perceived supervisor support is considered as the extent employees believe their supervisors value their wellbeing and contribution and offer them support. Supervisor support refers to the supervisor providing work-related assistance such as coaching and mentoring to their employees (Mohamed & Ali, 2016). Supervisors are viewed as agents of the organisation and they have a mandate to shape, guide and to assess the performance of their employees. As a result, employees regard their opinion as indicative of the organisations' position towards them (Mohamed & Ali, 2016). Supervisors are vital when it comes to influencing the behaviour and attitudes of their employees. Dysvik & Kuvaas, (2013) contend that PSS is characterised by relations between employees and supervisors being founded on trust, socio-economical resources, obligations and long-term orientation. Thus, the relationship is an exchange and employees who receive better treatment from their supervisors are expected to respond with more favourable behaviour and attitudes.

Just like POS, PSS can also be explained by the organisational support theory. In line with this theory supervisor support influences employees' levels of engagement and affective commitment (Shuck, 2013). This is mainly because employees know that performance evaluations by their supervisors are usually conveyed to executives who are viewed as organisational representatives. As such, PSS by employees strengthens their relationship and subsequently their engagement levels (Britt, 2003). When employees perceive high supervisor support the high quality of the relations facilitate an increase in employees' level of engagement (Cheng, Chang & Johnstone, 2013). Furthermore, Mohamed & Ali, (2016) argued that engagement in employees comes naturally when employees view their supervisors as inspiring. When supervisors consider their subordinates work as meaningful it develops their interest and engagement. Additionally, supportive supervisor support influences employee engagement and increases their enthusiasm, satisfaction and involvement in work (Schneider, William, Barbera & Martin, 2009).

2.3.1.7 Meaningful Work

Meaningful work is another key antecedent of employee engagement. Kahn (1990) contends that for an employee to perceive his/her work as meaningful he/she has to feel valuable, worthwhile, and useful. Thus, meaningful work makes an employee think that his or her contribution makes a difference to the organisation and the organisation values what he/she brings to the organisation. Other researchers affirm Kahn's 1990 explanation of meaningful work by stating that psychological meaningfulness is reached when employees believe their contribution brings value and that they truly matter to the organisation (Gruman & Saks, 2011; Bal & De Lange, 2014). Research conducted by the Gallup organisation also revealed that employees desire meaningful work to positively contribute to the success of the organisation. The employees would want maximum engagement and have their personal goals to have a link with those of the organisation to satisfy the vision and mission (Gallup, 2017). Similarly, Ferguson & Morton-Huddleston, (2016) claim that millennial's want to work in organisations that have purpose and values. They want work with a significant input into the organisation's mission and employees to have a genuine passion for what they do.

Steger, Dik & Duffy (2011) reiterate that meaningful work has positive organisational outcomes. Kouzes & Posner (2016) argue that employees are three times more likely to remain with the organisation when they believe their work makes a meaningful contribution. Clausen & Borg (2011) also contend that finding meaning in work increases organisational commitment and decreases employee turnover. On the other hand, when employees do not find meaning in work they experience negative outcomes such as psychological stress and long-term absence from work due to sickness. Kouzes & Posner (2016) further argued that meaningful work is important in realising full engagement in employees as it allows employees to have a deeper connection with their work, thus both the organisation and the employees will pursue the same goal and mission. Furthermore, they argued that when work is meaningful employees experience higher job satisfaction levels, engagement and sense of worthiness.

Empirical evidence has revealed that a relationship exists between meaningful and employee engagement. For instance, in their study on employees working at Colorado State University in the United States of America (USA) Stegar *et al.*, (2012) found that those who regard work to be more significant were meaningfully found to possess high work engagement. Their study also revealed that perceived meaningfulness in work is important when fostering employee wellbeing. Furthermore, Farlie (2011a) in his research on a company in North America

discovered that perceived meaningful work is a greater determinant of employee engagement than any other employee outcome.

Furthermore, Rothmann & Buys (2011) in their study concluded that meaningful work influences work engagement. They reported high employee engagement levels in employees who stated that there was high meaningfulness in their work. Farlie (2011b) reported that meaningful work is a critical job resource that boosts employee engagement and assists employees to get the most out of other resources to further their work engagement levels.

2.3.2 Organisational Level Employee Engagement Antecedents

Employee engagement is influenced by many factors at an organisational level. The next section of the study discusses the organisational level antecedents of employee engagement. These include organisational culture, communication, person job fit, person organisation fit, job resources, career growth, leadership and rewards.

2.3.2.1 Organisational Culture

Brenyah & Darko (2017) assert that organisational culture is a significant source of competitive advantage, and it positively or negatively impacts on organisational behaviour and corporate performance. Organisational culture is viewed as the values which define employees of an organisation and differentiate the organisation from its competitors (Suharti, Suliyanto, 2012). Furthermore, it is an array of assumptions developed by a group as they learn to manage challenges of internal integration and external adaptation. These assumptions are believed to have worked well for existing employees and new members are trained to believe in the same assumptions as being the correct way to think about those challenges (Megginson, Mosley, & Petri, 2006).

Cole (2012) contends that the purpose and objectives of an organisation determine its culture and subsequent impact on employee morale and engagement levels. Cole (2012) further argued that organisational culture should ensure that employees are dedicated to the strategy, vision, and mission of the organisation. Also, the culture should ensure that employees possess the will and means to contribute continuously to the attainment of the organisational goals. Thus, organisational culture contributes positively to the organisation through encouraging high employee morale and engagement.

The SET can also be used to explain the link between organisational culture and employee engagement. The theory proposes that social behaviour is a consequence of an exchange

process. The assumption is that when employees perceive the organisational culture as conducive, where they have support and it also allows them to have good relations with other members, they reciprocate by working with vigour, being dedicated and giving of their best (Brenyah & Darko, 2017).

Several studies were undertaken to ascertain the connection between organisational culture and employee engagement. In a study conducted on hospitality employees, Kalia & Verma (2017) established that organisational culture is a significant determinant of employee engagement. In their study, diverse dimensions of organisational culture such as experimentation and autonomy were positively associated with dimensions of employee engagement. Specifically, vigour and dedication were more particularly related to dimensions of organisational culture. In a study conducted on organisational culture and employee engagement inhibitors in Saudi banks, Shehri, Laughlin, Ashaab, & Hamad (2017) found that organisational culture enablers that contributed more to engagement were recognition and rewards, training and development (T&D) and organisational communication. lyasa & Ramly, (2018) also conducted a study on knowledge-sharing, organisational culture and employee engagement impacting on work innovation. The results of their study concluded that organisational culture, knowledge-sharing and employee engagement had a direct impact on work innovation. Also, that organisational culture had a direct influence on employee engagement.

2.3.2.2 Communication

Communication is a valuable concept that is important for organisational success. Karanges, Johnston, Beatson, & Lings, (2015) argued that internal communication is imperative for good in-house public relations as it has positive employee and organisational outcomes. Friedl & Vercic, (2011) further claim that internal communication plays two major roles in organisations. It provides a basis for information-sharing and for developing a sense of community within the workplace. Having a sense of community maintains relations between employees, supervisors and the organisation. Mishra, Boynton, & Mishra, (2014) contend that when an organisation shares its broader operations and information concerning individual jobs duties to employees, employees are more likely to respond to the gesture through hard work. At the same time employees would also advocate for the organisation when interacting with others, thus maintain a strong bond with the organisation.

Furthermore, First & Tomic, (2013) claim that employees who interrelate with the general public are important to the organisation as they are the sources of credible information.

Similarly, Kim & Rhee, (2011) contend that employees collect important information for their organisations and disseminate that information to others in the organisation. On the other hand, employees actively distribute information regarding their organisation in an active way thus developing support networks for the organisation both inside and outside of the organisation (Mazzei, 2014).

Communication has positive organisational outcomes such as employee engagement (Karanges *et al.*, 2015). Organisations that recognise the significance of two-way communication promote employee engagement. Regular feedback from employees through a strong in-house communication strategy is important for better employee engagement. Watson (2008) further asserts that encouraging engagement through communication gives employees direct responses to concerns and questions, establishes discussions among top management and all employees, and works on employee concerns and contributions.

Lockwood (2007) asserts that honest, consistency, and clear communication are influential determinants of employee engagement. Durkin (2007) further highlights the fact that without constant honest communication, employees become worried about the future of the organisation and will contemplate separating from the organisation. Also, Durkin (2007) suggested that organisations must share their values and purpose clearly with all employees. That way, employees become more indebted to making a change and to add value. Mishra *et al.*, (2014) believe that engaged employees are cultivated in a transparent, supportive and open working environment. Transparency between employees and the organisation results in employee engagement. Thus, through effective open communication employees will be engaged in organisational priorities.

The human resources division should uphold thoughtful communication to encourage employee engagement. Such strategies are critical to the continuing strength of the organisation. Lockwood (2007) added that reliable and continuous strategic communication should be guaranteed to the top leadership while, poor communication can cause mistrust, dissatisfaction and turnover. Therefore, to encourage employee engagement, management should ensure an environment that is characterised by proactive and direct communication plans.

2.3.2.3 Person-Job Fit and Person-Organisation Fit

Rahmadani & Sebayang (2017) believe that to support employee performance it is critical that there be a match between the worth of the employee with that of the organisation (person-organisation fit) and they also consider a match between the worth of the employee to the job (person-job fit). Person-organisation fit and person-job fit explore how employees interrelate with their surroundings to comprehend factors that impact on their quality of work (Chatman, 1989; Kristof-Brown, Zimmerman, & Johnson, 2005).

A person-job fit is referred to as the fit between the skills, knowledge and expertise of an individual with a specific task. With this fit, employees are anticipated to carry out their tasks without major concerns (Sulistiowati, Komari & Dhamayanti, 2018). The concept of person-job fit is grounded in the notion of the suitability of characteristics between an employee with their work surroundings (Robbins & Judge, 2013). To accomplish this fit, there are two kinds of suitability which have to be attained. These are the appropriateness of knowledge, individual skills and expertise as well as the appropriateness of individual personalities, for instance, employee values, interests and needs and encompassed by the organisation's climate.

The link between person-job fit and employee engagement is explained in the theory of Planned Behaviour by Ajzen in 1991 which highlights that employees with certain, skills, abilities and knowledge receive high supervision when performing their jobs which also affects their engagement levels on the job. When employees are comfortable with their jobs they will perform effectively and make every effort to achieve the objectives of the organisation (Hussain, 2016). According to Saks & Gruman, (2011) employees with high engagement levels with their jobs due to knowledge, skills and abilities fit the requirements of their jobs. As such, employees who have a fit with their jobs feel confident with their jobs and therefore tend to have more engagement with their jobs.

Shuck *et al.*, (2011) claim that a good job fit must exist for employees to be involved in meaningful work which positively impacts on work-related attitudes. A good job fit encourages behaviour inclined towards positive organisational outcomes like discretionary effort which generates higher performance. For instance, employees having a better job fit can claim that their job demands permit them to work at a certain level of mental and physical comfort with their values corresponding with those necessary for the job thus resulting in improved performance. Rahmadani *et al.*, (2017) further state that research on person-organisation fit has enhanced the understanding of improving the fit between employees and their organisations.

Having a good fit promotes positive individual work outcomes such as commitment and retention which in the long run impacts positively on customer satisfaction. (Kristof, 1996; Chatman, 1991; O'Reilly, Chatman, & Caldwell, 1991).

However, while a good job fit may have positive organisational outcomes, Moreland (2013) expressed the view that a poor job fit may result in employees being disengaged impacting negatively on their employer's bottom line. Relatedly, Gallup (2017) established that 18 per cent of employees who are not engaged impede the success of their colleagues which results in decreased morale and reduced productivity in the organisation.

Rahmadani *et al.*, (2017) state that person-organisation fit refers to a fit between an individual and the organisation he/she works for. It is commonly theorised as a match between individual employee values and those of the organisation (Kristof-Brown *et al.*, 2005). According to Sultanova & Chechina, (2016) individuals are naturally driven to associate with others in the social environment of their organisation. Consequently, this need for compatibility will inspire individuals to be involved in work activities that are required by the organisation. Similarly, Astakhova & Porter, (2015) contend that person-organisation fit increases the development of robust relationships that facilitate an interchange of resources between an organisation and its employees. Kristof-Brown & Guay (2011) argue that organisations with compatible employees usually perform better, experience higher levels of commitment, and employees reach higher positions in their organisations. Similarly, Risman, Erickson & Diefendorff (2016) reason that employees that are compatible with their organisations are highly likely to contribute more positively with work that surpasses the required work activities.

The idea that person-organisation fit encourages employees to display positive behaviour required for organisational success encouraged researchers to find out whether or not person-organisation fit influences employee engagement through employee behaviour required for organisational success. Rich, Lepine & Crawford (2010) assert that when employees think that their tasks demand behaviour that is consistent with what they believe in they will consider the tasks valuable and will be fully engaged in them. Furthermore, Biswas & Bhatnagar, (2013) argue that person-organisational fit increases the sense of psychological safety in employees. Therefore, since safety is a precondition for engagement in employees, there is the likelihood that increased levels of psychological safety in individuals could lead them to be highly engaged. Similarly, Hamid & Yahy, (2011) argue that when employees perceive positivity in the workplace they reciprocate with positive outcomes. As such, when employees believe that

a match exists between their values and those of the organisation, they are more likely to perform their work efficiently and effectively by being engaged fully in their jobs.

2.3.2.4 Job resources

Studies have shown that job resources influence employee engagement (Shantz, Alfes, Soane & Truss, 2013; Bakker & Bal, 2010; Christian, Garza, & Slaughter, 2011). Job resources are the social, physical, or organisational facets of a job that are useful in accomplishing work-related goals (Bon & Shire, 2017). Job resources such as autonomy, performance feedback and prospects of professional growth, and skill variety impact employee engagement positively over time. Job resources are regarded as both intrinsic and extrinsic motivators. Intrinsic motivation such as self-accomplishment develops from within the individual whilst extrinsic motivation such as rewards are provided to an individual by an external party. Intrinsically, job resources encourage employee learning, development and growth. Extrinsically, job resources are significant in the attainment of work and organisational objectives (Bakker & Leiter, 2010).

Provision of job resources such as learning opportunities provides employees with skills, know-how and abilities to carry out their duties effectively. This will strongly impact on employee engagement as employees know their expectations from the organisation. Guest (2014) argued that learning and development offers a conduit for employee fulfilment and growth which encourages them to take challenging opportunities which they may have not taken if learning and development had not been offered. In addition, Harris (2018) argued that learning and development can be a channel through which employees can find meaning and or personal work-role fit thus, also influencing their engagement with the organisation.

Lin & Ping (2016) contend that employees usually leave their organisation due to lack of job resources. They argue that job autonomy as a job resource is vital in determining an individual's response to work. Job autonomy can be referred to as the extent individuals have discretion and freedom to respond to different aspects of their work. According to SheeMun, Suhaimi, Abdullah, Rahman & Mat (2013), the degree of autonomy given to employees drives them to develop a sense of belonging to the organisation through the exhibition of high levels of engagement. However, failure to provide such job resources may lead to burnout in employees. According to Lin & Ping (2016), the SET can be used to explain the various work engagement levels in the workplace. They further argued that the amount of emotional, cognitive and physical resources that individuals give to their work performance depends on the job resources

they receive from their organisation. As such, job resources generate work engagement which in turn predicts employees' satisfaction.

2.3.2.5 Career Growth

Career growth is not spared from factors that influence employee engagement. Research has established that engagement is widely connected with varying positive individual and organisational outcomes. Siddhanta & Roy (2011) contend that organisations that value the development of employees and their career paths have employees who are more engaged than their competitors. Career growth is seen as the opportunity for employees to develop their careers within the organisation by taking on challenging tasks and job responsibilities (Bai & Liu, 2018). Career growth is also distinguished in two ways namely inter-organisational and intra-organisational growth (Weng & Xi, 2017). Inter-organisational growth is concerned with the growth of ability and experience when employees move organisations. Intra-organisational growth is concerned with employee career advancement within the individual organisation. According to Choudhury & Mohanty (2018) provision of key management practices such as having career discussions, displaying personal interest, recognising employee contributions, celebrating success and using a system of empowerment are factors imperative for intra-organisational growth.

Weng & McElroy (2012) conceptualised career growth being captured by three factors which are: career goal progression which entails the extent to which one's current job is significant to and offers opportunities to an individual to achieve his or her career goals; professional ability development that refers to the extent to which an individual's current job allows him or her to acquire new knowledge and skills; and organisational rewards referring to the perception by an employee of the rate and likelihood of being promoted, and remuneration growth meaning employee perceptions of the rate, amount and probability of an increase in remuneration.

Career growth is closely associated with employee engagement. Hu & Wang (2014) argue that engagement is a persistent, active and integrated state of an employee at work which is seen when employees have good mental characteristics, increased enthusiasm for work, have high energy, are absorbed and feel happy about their work. Hu & Wang (2014) further contend that millennial employees are more worried about their career development and would welcome more career growth opportunities to perfect themselves. Bai & Liu (2018) argue that the theory of need for achievement can also explain the bond between career growth and employee

engagement. They argued that when organisations provide career space and give employees adequate opportunities to reach their growth needs it will increase their dedication and vigour in work.

Mohsin (2015) claims that organisations that provide employees with opportunities to grow their careers skills and knowledge promote employee engagement in the employees. Research also contends that organisations that provide opportunities for career growth for their employees are six times more likely to cultivate engagement than their counterparts (Osborne & Hammoud, 2017). In their report on Canada, Denmark and the United States of America they highlighted that employee engagement was high in organisations that offer career growth opportunities. Additionally, Bakker, Demerouti, & Brummelhuis, (2012) claim that employee mental resources such as optimism and self-respect can effectually predict engagement in employees. Thus, the satisfaction of individual needs and professional values employees get from the organisation encourages the employee to have a satisfying psychological experience in their employment. In this regard, the provision of career growth opportunities will go a long way in promoting employee engagement in organisations. Management in organisations has a huge role to play in ensuring career growth opportunities whose profound impact on positive organisational outcomes such as employee engagement is critical for business success.

2.3.2.6 Leadership

Cooper-Thomas & Xu (2010) believe that leadership influences engagement. Towers Perrin (2009) claims that leadership is an effective ingredient in growing a business. Hence, not only will proficient and motivated leaders drive the business forward but they also find suitable methods of making employees perform beyond their required roles. Morgan (2004) suggested that there are certain characteristics managers should have like transparency and effective communication skills which encourage employees to be engaged.

Hewitt, (2012) maintains that employees need to be sure that the future is bright and that they perceive that senior management is steering the organisation to success. In the same vein, MacLeod & Clarke, (2009: 31) argue that a good leader “ensures a strong, clear, and unambiguous organisational culture that gives employees a line of sight between their profession and the image and aims of the organisation”. Such leaders are employee-focused by being proactive, tactical and anticipatory. They make available a logical picture of the direction in which the organisation is going and what information employees need to deliver in their jobs.

Considerable research has been undertaken to deliberate on the relationship between leadership and engagement (Xu & Cooper, 2010, Wallace & Trinka, 2009, Tims, Bakker & Xanthopoulou, 2011). The results of these studies suggest that noble leadership is critical for employee engagement. Anitha (2014) argues that leaders should communicate that the employees' efforts play a critical role in the overall business success. When employees work is meaningful and considered significant, it generates interest and engagement in employees. Likewise, Schneider *et al.*, (2009) argue that true and supportive leadership is theorised to impact positively on the engagement of followers by increasing their enthusiasm, involvement, and satisfaction for work.

The leadership style employed is also important in determining employee engagement. Breevaart, Bakker, Hetland & Demerouti (2014) contend that leadership style encourages employees to apply their capabilities and thus to improve job-related resources leading to positive effects on employee engagement. Research indicates that transformational leadership plays a significant role in fostering employee engagement (Tims *et al.*, 2011). Other scholars have claimed that transformational leaders instil engagement in their employees by directly affecting their trust levels (Shuck & Wollard, 2009; Bailey, Madden, Alfes & Fletcher, 2015).

To ensure engagement, transformational leaders make sure that the work environment is conducive and also pay special attention to the needs of their subordinates. Also, transformational leaders motivate their followers to pursue greater levels of performance through helping them reach their potential by their commitment to an influential vision and higher purpose (Wiedemann, 2019). Further, Mariappanadar (2018) discovered that individual perceptions of the experienced and preferred leadership style is a significant predictor of employee engagement. Also, differentiated leadership styles have a stronger (complementary) effect on employee engagement when the perceptions of experienced participative and supportive leadership styles were aligned with perceptions of respective preferred leadership styles. As such, leaders are significant contributors to employee engagement if they can influence the quality of work of their subordinates and assist them to feel passionate about their work.

2.3.2.7 Rewards

Another antecedent of employee engagement is employee rewards (Koskey & Sakataka, 2015). Employee rewards comprise both financial and non-financial rewards. Financial rewards are monetary whereas non-financial are non-monetary and include benefits such as holiday

perks, employee assisted initiatives, travel discounts, among others. Anitha (2014) argued that the level of engagement of an employee depends on the attractiveness of his or her rewards. Ncobo (2012) adds that adequacy and fairness of rewards are imperative in determining employee engagement. Thus, notwithstanding the type or quantity of rewards received, it is the employee's opinion of whether the rewards are fair which determines his/her contentment thereby impacting positively or negatively on engagement levels. This relationship is explained by the SET which emphasises the principle of reciprocity between employers and their employees. Explaining this relationship, Saks (2006) observes that after receiving rewards employees feel obliged to reciprocate with increased levels of engagement. Research proposes that the higher the levels of rewards the stronger the correlation with engagement especially if the organisation is characterised by a performance-related pay culture (Dajani & Zaki, 2015). Conversely, insufficient rewards may lead to work burnout in employees. As such, to attain greater levels of engagement, organisations should present their employees with a satisfactory standard of rewards.

The next section of the chapter discusses various instruments used to measure employee engagement.

2.4 Measuring Employee Engagement

Various scales were devised to measure the concept of employee engagement including the Maslach Burnout Inventory- General Survey (MBI-GS), the Gallup Workplace Audit (GWA), the Development Dimension International (DDI), and the Utrecht Work Engagement Scale (UWES).

2.4.1 Maslach Burnout Inventory- General Survey (MBI-GS)

Maslach & Leiter (1997) developed one of the earliest forms of employee engagement scale. Their measuring scale is known as the Maslach Burnout Inventory-General Survey (MBI-GS) and it comprises twenty-two items which were originally used to measure burnout. The scale assessed burnout using three subscales which are cynicism, exhaustion and professional efficacy. Maslach and Leiter (1997) regarded low levels of exhaustion and cynicism to suggest engagement with high levels to suggest burnout. On the other hand, high levels of professional efficacy suggested engagement with low levels suggesting burnout.

Researchers have found limitations to the use of MBI-GS as a measuring instrument for employee engagement (Bakker, Albrecht & Leiter 2011; Schaufeli *et al.*, 2002). Researcher's disputed measuring engagement against burnout, the absorption being in the opposite direction

reduced efficacy and individuals who do not feel exhausted may not experience energy (Ababneh, 2015). Following an empirical study on whether or not engagement is distinct from burnout, with burnout measured using the MBI-GS while engagement was measured using the Utrecht Work Engagement Scale (UWES). Schaufeli *et al.*, (2002) discovered that the two concepts moderately and negatively related although the concepts shared a quarter of their variance. The authors then agreed that engagement must be referred to “as a insistent affective mental state in contrast to burnout where people feel psychologically strained in specific moments.” (Ababneh, 2015: 15).

2.4.2 Gallup Workplace Audit (GWA)

Consulting firms have also developed their employee engagement measuring scales. Among them is the Gallup Workplace Audit (GWA) which was developed by the Gallup organisation in 1998. The measuring scale was developed from studies on motivation, satisfaction, supervisory practices and group effectiveness. (Gallup, 2013). The GWA regards engagement as related to job involvement and satisfaction and developed to measure groups of survey items that are finding problems inside a supervisor’s span of control and measuring consequences of employee attitudes (Ababneh, 2015). In this measuring scale employees are assessed using twelve questions (Q12). The twelve questions address the following fields: meaningful tasks, feedback and recognition, physical resources, clear expectations, growth and development, commitment to quality, opportunities to know new skills, progress discussions, request for inputs, caring colleagues and opportunity to use talent (Ababneh, 2015).

The GWA has received criticism in engagement circles. For example, Macey & Schneider (2008) argue that the instrument is a modern scale of measuring satisfaction in employees which describes the environment under which engaged employees operate in that it is assumed to indicate engagement rather than measuring it. The GWA is also seen as a measuring scale that assesses the determinants of overall job satisfaction rather than individual’s levels of engagement (Schaufeli & Bakker, 2010).

2.4.3 Development Dimension International (DDI)

Another employee engagement measuring scale developed by consulting firms is the Development Dimension International (DDI). The scale consists of 20 measuring items assessing an individual’s opinion of alignment effort with teamwork, strategy, development plans, recognition and support, empowerment, loyalty and satisfaction (Ababneh, 2015). Similar to the GWA, the DDI engagement scale echoed the satisfaction–engagement approach.

For instance, certain items on the scale assessed job satisfaction like “I am satisfied with my job”. Other items measured sub-facets of job satisfaction for example “people in my workgroup cooperate to get the job done”, “In my workgroup, my ideas and opinions are appreciated” (Ababneh, 2015; 13). Researchers have argued that determining employee engagement with measuring scales that assess satisfaction brings ambiguity to employee engagement when trying to separate it from other related constructs (Saks & Gruman, 2014). For this reason, to avoid ambiguity, the present research did not adopt any measuring scale that seemed to measure something else other than employee engagement.

2.4.4 The Utrecht Work Engagement Scale (UWES-17)

As discussed previously in the chapter, this research adopts the definition of employee engagement by Schaufeli *et al.*, (2002) which highlights three important facets which are vigour, dedication and absorption. Ultimately, the study, therefore, adopts the UWES-17 by Schaufeli *et al.*, (2002) as its measuring scale. The UWES is the most extensively used scale in employee engagement circles because of its usefulness in measuring the three important facets of engagement that are: vigour, dedication and absorption in the workplace.

The UWES-17 consists of 17 items measured on a seven-point Likert scaling from 0 never to 6 always. The 17 items are combined to measure the three facets of engagement. The vigour dimension is comprised of six items (At my work I feel like bursting with energy; I can continue working for very long periods at a time; When I get up in the morning, I feel like going to work; At my job, I feel strong and vigorous; At my job, I am very resilient, mentally; and At my work I always persevere, even when things do not go well), the dedication dimension consisting of five items (I am proud of the work that I do; To me, my job is challenging; I am enthusiastic about my job; My job inspires me; and I find the work that I do full of meaning and purpose) while adsorption consists of six items (Time flies when I’m working; I am immersed in my work; I feel happy when I am working intensely; It is difficult to detach myself from my job; I get carried away when I’m working; and When I am working; and I forget everything else around me) (Schaufeli, Bakker & Salanova 2006). Schaufeli & Salanova (2011) claim that the UWES-17 possesses good psychometric attributes because of its ability to measure the three dimensions of engagement without the length of the scale influencing responses from participants.

Several studies have used the UWES-17 measuring scale to assess employee engagement. According to Schaufeli and Bakker (2010) UWES-17 has been widely used because of its

consistent factorial structure across both professional and national samples. Also, studies have adopted the UWES-17 because of the relative stability of its scores over time (Schaufeli & Bakker, 2010). Furthermore, Ghadi (2012) argues that the UWES-17 is an unbiased scale for measuring employee engagement across geographical boundaries. For instance, UWES-17 has been used in the USA (Kim, Shi & Swanger 2009), Nigeria (Karatepe & Olugbade 2009), The Netherlands (Schaufeli & Bakker, 2010), China (Yi-Wen & Yi-Qun, 2005) and South Africa (Storm & Rothmann, 2003). Also, a number of the studies that have used the UWES-17 measuring scale have been found to have an acceptable reliability with a Cronbach alpha coefficient ranging typically between 0.8 and 0.9. Additionally, confirmatory factor analysis in previous studies has proved that the UWES-17 is a sufficient measuring scale to measure the three dimensions of employee engagement (Bakker 2009; Schaufeli & Bakker 2010; Ghadi 2012)

Although the UWES-17 is the widely used as a measuring scale to assess employee engagement, research has also proven that its three dimensions (vigour, dedication and absorption) are highly correlated to explain employee engagement (Gadhi, 2012). Thus, it is recommended to use of the UWES-17 with a total score of the three dimensions as an indicator of employee engagement. Seppala *et al.*, (2009) stated that the average correlation between the three dimensions of engagement is high ($r = 0.60 - .90$). For that reason, engagement can, therefore, be reflected in a single high order construct.

2.5 Employee Engagement Outcomes

Gruman *et al.*, (2011) argue that high employee engagement levels in organisations result in competitive advantage. This section of the study discusses employee engagement outcomes that contribute to organisationally competitive advantage. Employee engagement outcomes such as increased employee performance, turnover intentions, organisational citizenship behaviour (OCB) and employee innovation will be discussed.

2.5.1 Increased employee performance

Employees are the most important asset of any organisation. Their performance affects an organisation's profitability and reputation (Sendawula, Kimuli, Bananuka & Muganga, 2018). Increased employee performance is central to an organisation's competitive edge over others. Therefore, an investment in employee-related activities such as a healthy work-life balance and employee development are significant to any organisation that seeks to achieve a competitive edge over others. Investment in employee engagement is seen as a channel to competitive

success through increased employee performance. Organisations that prioritise employee engagement are ranked amongst the highest performing organisations and not only are they profitable, they also have high returns on assets in contrast to companies with low engagement levels. A close association exists between employee engagement and employee performance. Men (2015) claims that engaged individuals are characterised by absorption, energy, efficacy, vigour, involvement, enthusiasm and dedication. These characteristics present a positive state in employees which increases their work effectiveness and efficiency.

Engaged employees are conscious of their work environment. They work well with others to increase performance in their jobs to the advantage of the organisation (Ologbo & Sofian, 2013). Furthermore, engaged employees experience positive psychological emotions which widen how they rationalise things causing them to be more aware and absorbed in their work. According to Gichochi, (2014) this positive state of mind increases employee performance as employees become more engrossed in their work. Engaged employees display positive attitudes at work. They are always psychologically present at work which reduces chances of them making errors and mistakes. Thus, their performance is always at a higher level (Shantz *et al.*, 2013).

Organisations that take great care of their employees have employees who display engagement behaviour at work leading to increased performance work outcomes (Ariani, 2013). Employees who have better treatment from their employers are more likely to recompense the gesture through increased performance. Otieno, Wangithi, & Njeru, (2015) argued that when employees receive motivating job resources they feel indebted to repay the organisation by displaying higher work engagement in the form of better attitudes and behaviour. Also, Rashid, Asad, & Ashraf, (2011) contend that engaged employees experience excitement and are passionate about their work. They identify themselves with their jobs and dedicate additional effort to their work. As such, engaged employees experience increased performance which has a positive effect on the organisation's competitiveness.

Several studies have been undertaken to determine the link between employee engagement and employee performance. In their study of 262 self-employed and 1900 employees in the Netherlands, Gorgievski, Bakker, & Schaufeli (2010) found employee engagement positively correlated to task performance for both groups ($\beta = .39 \sim .44$, $p < .001$). Similarly, in their study on weekly work engagement and performance on Dutch teachers, Bakker & Bal (2010) discovered that weekly work engagement positively correlated with weekly job performance

($\gamma = .424$, $p < .001$). Anitha (2014) undertook a study of the impact of employee engagement determinants on employee performance. The findings revealed a strong relationship between employee engagement determinants and employee performance with a significant path validity of $t=14.87$ and co-efficient of $r^2 = 59.7$ per cent. The high coefficient value shows the degree of strength of employee engagement in predicting employee performance.

The role taken by employee engagement in increasing employee performance should not be taken lightly by organisations. Management in organisations should ensure that a conducive environment exists for employee engagement to take place if they want to attain a competitive edge over others through the performance of their employees. Thus, employee engagement is a critical factor imperative for business success.

2.5.2 Organisational citizenship behaviour

Another important consequence of employee engagement is organisational citizenship behaviour (OCB). The term OCB was originally coined by Organ in 1988 referring to “individual behaviour that is discretionary, not directly or explicitly recognised by the formal reward system and that in the aggregate promotes the effective functioning of the organisation” (Organ, 1988: 548). Abd-Allah (2016) states that organisational citizenship behaviour involves employees going beyond their set standards in the performance of their duties. It involves carrying out extra job activities which involve an individual going beyond the specified job activities. These extra job activities may include helping others with their work, adhering to workplace rules and following workplace procedure and policies despite personal inconvenience.

Abd-Allah (2016) contends that OCB can be categorised into five personality factors which are: conscientiousness, altruism, civic virtue, sportsmanship and courtesy. Conscientiousness refers to an individual’s dedication to work which goes beyond formal requirements such as volunteering to perform job duties beyond the minimum required levels and working long hours Organ (1988). Altruism consists of voluntary behaviour whereby an individual assist others with their work (Podsakoff, MacKenzie, Paine, & Bachrach, 2000). Civic virtue involves an individual’s participation in the life of the organisation such as being at meetings considered not compulsory and in keeping abreast of changes that happen in the organisation (Allison, Voss & Dryer, 2001). Sportsmanship is concerned with behaviour by an individual to warmly tolerate irritations that come with unavoidable organisational situations. Courtesy denotes

behaviour in which an individual focuses on problem prevention and takes steps to reduce the effects of the problem on the future (Allison *et al.*, 2001).

According to Kataria, Garg, & Rastogi (2013) employee engagement is often linked to OCB. Previous studies have supported the association between engagement and OCB. The studies have confirmed that employee engagement results in higher OCB (Saks 2006; Babcock-Roberson & Strickland, 2010; Christian, Garza, & Slaughter, 2011). Barman, (2012) argued that with engaged employees, the occurrence of organisational citizenship behaviour increases. However, this will not transpire unless employees are provided with a climate and an environment that enhances their engagement levels. Employee engagement results in proactive behaviour that is synonymous with organisational citizenship behaviour. Christian *et al.*, (2011) support this notion by arguing that engaged employees are more vigorous, dedicated and proactive. They put in their resources and exhibit extra-role behaviour in comparison to others which increases their job performance.

Similarly, Babcock-Roberson *et al.*, (2010) highlight that engaged employees are engrossed in their work which makes them display extra-role behaviour such as altruism, virtuousness and conscientiousness. In support, Shuck *et al.*, (2011) say that engaged employees are more attached to their work and have a keen interest in the success of their organisation. They believe this can be achieved by going the extra mile when undertaking their formal job requirements.

Empirical studies on employee engagement and OCB confirmed that employee engagement influences OCB. In their study, Kataria *et al.*, (2013) highlighted that employee engagement measures which are dedication, vigour and absorption were positively related to OCB dimensions which are courtesy, altruism, conscientiousness, sportsmanship and civic virtue and. Their study proved that higher employee engagement levels in employees result in them displaying OCB ensuring sustained organisational effectiveness. Likewise, Barman (2012) investigating the OCB as a consequence of employee engagement and found a significant positive correlation between the two constructs. Barman (2012) further reminds us that for this relationship to succeed, the right work environment should be provided.

Babcock-Roberson *et al.*, (2010) investigated the link between employee engagement and OCB, with employee engagement acting as a mediator between charismatic leadership and OCB. Their study revealed a significant positive association between charismatic leadership and employee engagement. Charismatic leadership is characterised by leaders who can instil hope and optimism, who can communicate the vision and mission, set high expectations,

exhibit confidence in followers, and show confidence that these expectations can be achieved. (Le Blanc, Romá & Wang 2019). Also, charismatic leadership and OCB were significantly positively related. Furthermore, employee engagement and OCB were also positively related. Shantz et al., Trussc & Soaned (2013) testing the relationship between job characteristics such as task variety, task significance, feedback and autonomy against OCB and engagement as a mediator found a strong significant relationship between employee engagement and OCB. Also, employee engagement mediated the association between job characteristics and OCB.

Furthermore, Rurkkhum & Bartlett (2012) in their research on employee engagement and organisational citizenship behaviour with HRM practices playing the moderation role found that employee engagement and all dimensions of OCB were positively correlated. The results also indicated a positive relationship between engagement, human resource practices and OCB. However, no moderating effects were discovered between human resource practices and OCB.

The relationship between employee engagement and organisational citizenship behaviour reveals the importance of investing in employee engagement. Again, the SET explains why an investment in employee engagement is fundamental for organisations. Employees will reciprocate to the investment by the organisation by working beyond the required standards in performing their duties which has a positive impact on organisational effectiveness and achievement of goals.

2.5.3 Turnover intentions

Employee turnover intention is also another important consequence of employee engagement. However, there is a dearth of evidence relating to employee engagement and turnover intentions. Berry (2010) articulates that the existing information views employee engagement as a characteristic of the individual instead of being a characteristic of the work environment.

Turnover intentions refer to an employee's behavioural attitude towards leaving an organisation (Aydogdu & Asikgil, 2011). Turnover intention is distinct from actual employee turnover in that actual turnover involves an employee detaching himself or herself from the organisation. Employee engagement is negatively related to turnover intentions meaning that engaged employees do not think about separating themselves from the organisation. Ngobeni & Bezuidenhout, (2011) argue that the more engaged employees are in an organisation the more likely they are to stay longer with the organisation. Saks (2006) also contends that engaged employees possess positive energy and are actively and persistently involved in their work thus leaving no time for adverse thinking such as separating themselves from the

organisation. Saks (2006) further argues that it is the work itself that employees think about when they decide to stay with the organisation. Hence, when the work is engaging, employees rarely think about separating themselves from their organisations.

Some studies have been conducted to determine the relationship between employee engagement and turnover intention (Soane *et al.*, 2012; Bakker & Demerouti, 2008; Saks, 2006; Yalabik *et al.*, 2013). In these studies, employee engagement had a negative association with the intention to leave. Thus, low intention is recognised as a positive consequence of employee engagement. Yalabik *et al.*, (2013), claim that the association between employee engagement and intention to leave may be clarified using the Broaden and Build (B&B) theory of positive emotions. Using the theory, positive emotions lead to employee engagement. Once employees are engaged, they will continue to have positive work experience (Bakker & Demerouti, 2008; Soane, Truss, Alfes, Shantz, Rees, & Gatenby, 2012). As a result of such positive work experience psychologically an employee could reflect interest which raises feelings in an individual of becoming more involved, expanding oneself by seeking more information and relating more with the person that has stirred the interest. These feelings in employees will influence their continued stay with the organisation.

2.5.4 Personal employee outcomes

Employee personal outcomes is another consequence of employee engagement (Andrew & Sofian, 2012). These outcomes directly benefit an employee. For example, individual wellbeing consequences like better psychosomatic and mental health, and positive feelings at the workplace (Simbula & Guglielm, 2013). Lu, Wang & Bakker, (2014) argue that employees who are truly engaged experience positive effects such as enthusiasm, joy and more happiness. Engaged employees are optimistic, helpful, open-minded and more open to opportunities (Gutermann, Lehmann-Willenbrock, Boer, Born & Voelpel, 2017). Furthermore, engaged employees are less susceptible to absenteeism, burnout and sickness. Their health insurance costs are very low in comparison to disengaged employees (Albrecht, Bakker, Gruman, Macey & Saks, 2015).

Purcell (2014) argues that employees with high engagement levels develop their own personal and job resources. They change their work environment to suit their abilities and personal skills. This makes them develop a high sense of person-job fit (Lu *et al.*, 2014). Also, Harju, Hakanen & Schaufeli (2016) highlight that engaged employees are motivated by challenging work which also creates motivation for other job crafting activities, which encourages

employees to develop more resources and perform their jobs better. The outcomes for employee engagement are not for the benefit of the individual alone. They have more positive repercussions for the organisation, therefore, organisations should maximise on the engagement of their employees to attain goals and objectives.

2.5.5 Employee innovation

Employee innovation is an important consequence of engagement in employees that determines the success of organisations. Anderson, Potočnik & Zhou, (2014) claim that innovation in organisations has increasingly become a significant factor contributing to enhanced organisational performance, long-term survival and success. The term employee innovation was coined by Amabile in 1988 referring to the “generation and use of new ideas or behaviours (Amabile, 1988:126).” Rao (2016) further described employee innovation as engaging in actions intended to generate and implement new ideas, products, services and processes. It also involves cognitive processes which include associated thoughts and feelings of an employee that are reflected in their innovative behaviour. Engaged employees openly provide discretionary effort as part of their daily work activities thus organisations that value employee engagement ultimately cultivate greater innovation in their employees (McLeod Report, 2009).

According to Rao (2016), employee engagement results in innovative behaviour in employees whereby they go beyond the required individual roles to team up with colleagues, suggest ideas that improve the organisation and make substantive efforts to improve the image of the organisation in the external environment. Accordingly, Gichochi (2014) contends that employee engagement assumes an important antecedent role to attaining innovation in the workplace. Furthermore, Vazirani (2007) cited in Rao (2016) contends that engaged employees constantly perform at higher levels, they use their capabilities with passion daily to enhance innovation and to move the organisation forward. According to Gallup (2015), there is a direct relationship between employee engagement and innovation in employees. Employees have an inborn ability to innovate, therefore, there is a likelihood that engaged employees will suggest innovative ways to advance business processes.

Using the SET to explain the relationship between employee engagement and innovation, Gichochi (2014) argued that the SET provides a theoretical framework under which engaged employees involve themselves in innovative behaviour. The SET highlights that when organisations value their employees, train and empower them, employees develop a sense of consideration thereby reciprocating the gesture to the organisation by displaying engagement

behaviour. Engaged employees are motivated to perform more than their prescribed roles resulting in creativity and innovation in the workplace. Gichochi (2014) further believes that engaged employees are a cradle of innovative performance, therefore, they attract capable people to the organisation.

Park *et al.*, (2013) argue that employees experience positive emotions that encourage them to be open to more innovative thinking and ideas and to apply them. They further highlighted that the drive generated by employee engagement will cause organisations to innovate thus making employees more proactive and having a sense of responsibility. In addition, Tamir (2016) reasons that displaying innovation requires intrinsic motivation and a level of energy which ensures that employee innovative behaviour is always aroused. In this regard positive feelings in employees will shape their way of thinking further to make them enjoy the work thus motivating the innovative behaviour in them. Organisations should therefore dedicate considerable amounts of energy into making sure that employees experience positive emotions if they are to reap the benefits of innovation in their employees.

Rao & Weintraub, (2013) contend that innovation in employees is a process that requires engagement to maintain sustainability, continuity and growth of the organisation. As such, maximising employee innovation should be a priority for organisations. Employee innovation generates competitive edge and work achievement satisfaction through improvement and differentiation in products and services (Park *et al.*, 2013). In support, Spiegelare, *et al.*, (2012) states that employee innovation enhances competitive advantage in organisations through continual introduction and application of new ideas, products and processes that are beneficial to the organisation.

Although employee engagement is regarded as a significant antecedent of innovation, there isn't sufficient empiric research that links the two phenomena. Prior studies showed a positive relationship between employee engagement and innovative behaviour. For instance, Slatten & Mehmetoglu (2011) revealed that employees who are highly engaged in their work are more likely to show a more innovative behaviour during their role performance. They argued that highly engaged employees have a positive state of mind that helps employees to broaden their thought-action process. Studies have also revealed that employee engagement influence learning motivation which results in positive work behaviour such as employee innovation thus suggesting an indirect association between employee engagement and innovation (Montani, Odoardi & Battistelli 2014; Masvaure, Ruggunan & Maharaj, 2014). Similarly, Agarwal *et al.*,

(2012) have found that engagement has a positive correlation with innovative work behaviour and that employee engagement mediated the relationship between Leader-Member Exchange (LMX) relationship and innovative work behaviour. According to Bakker & Leiter (2010), engaged employees always hold a positive attitude which encourages the integrative and creative perception to create value in the service enterprises. Thus, this study expected to find a positive link between employee engagement and innovative work behaviour.

Slatten & Mehmetoglu (2011) in their research on employee engagement and innovation in the hospitality industry found that employee engagement had a positive association with innovative behaviour in employees especially in jobs that dealt directly with customers. Their findings were in line with other scholars who argued that employee innovation results from engagement along with reduced staff turnover, improved customer service, increased work commitment and willingness to put extra hours into one's work (Echols, 2005; Right Management, 2009 & Rao 2016). Also, Sundaray (2011) states that engaged employees are more immersed and enthusiastic about their work which results in employees being creative and innovative. This argument is supported Langelan, Bakker, Van Doornen, & Schaufeli, (2006) cited in Rao (2016) whose research into two personality factors, extraversion and neuroticism revealed that an amplified relationship between employees and their work could result in employee engagement and subsequently innovation.

Rao (2016) in a study on the interplay between employee engagement and innovation discovered that employee engagement positively impacts upon employee innovation. Rao (2016) declares that innovation is imperative for organisations to survive the competitive and ever-changing business environment and for organisations to survive innovation has to be embedded in their culture by focusing more on employee engagement. The arguments by Rao (2016) therefore suggest that organisations should invest in providing mechanisms that support employee engagement to achieve innovative behaviour.

2.6 Chapter Summary

The present chapter reviewed literature related to the concept of employee engagement. The chapter commenced with tracing the evolution and discussion of the meaning of the concept. Several definitions were discussed before settling on the definition of Schaufeli *et al.*, (2002) which focused on the three dimensions of engagement which are vigour, dedication and absorption. Also, discussed in the chapter are the antecedents of employee engagement. Furthermore, the chapter also deliberated on how employee engagement is measured.

Measuring instruments such as the GWA, DDI, MBI-GS and UWES were discussed. As indicated in the chapter the present study adopts the UWES measuring instrument. The chapter also discussed the consequences of employee engagement. The discussion of the consequences of employee engagement shows how the concept is guided by the SET discussed in a previous chapter which highlights the principle of reciprocity that explains why employees engage in constructive behaviour in the workplace. The next chapter will present the concept of skills and skills development. In the chapter factors influencing skills development and benefits of skills development will be discussed.

CHAPTER THREE

SKILLS AND SKILLS DEVELOPMENT IN THE KNOWLEDGE ECONOMY

3.1 Chapter Introduction

The previous chapter looked at the concept of employee engagement. The chapter discussed the evolution and meaning of the concept, factors influencing employee engagement and its outcomes. Also discussed is measuring scales for employee engagement. The present chapter provides an overview of the skills development concept. Specifically, the chapter focuses on the meaning of skills development, various skills development systems including the Zimbabwean government initiatives on skills development, factors influencing skills development and the benefits of skills development. Under the Zimbabwean skills development system, several skills development strategies adopted by Zimbabwe are presented. The chapter concludes by giving a chapter summary of the discussion of the whole chapter.

3.2 The Meaning of Skills and Skills Development

Skills development is identified as one of the essential factors contributing to reduced social and economic exclusion. Accordingly, skills development has been leading much of the literature in the last decade about individual, organisational and national development (Delpont, 2013). Mopeli (2014), highlights that skills development is imperative for organisations as it works as a management's tool to improve their competitiveness and sustainability.

Several definitions have been propounded to expand on the meaning of skills development. However, it is essential to, first of all, allude to the meaning of skills before focusing on 'skills development' as a phrase. Rozhkov, Cheung & Tsui, (2017) argue that the term skill usually refers to ability or knowledge in individuals attained through training, education and experience. In addition, Majama & Magang (2017) note that skills are the capabilities one has to have in order to perform a task or job at a particular level of competence. Individuals who do not possess such skills are less likely to implement their tasks effectively (Majama & Magang, 2017). Molodchik & Jardon (2017) argue that skills are usually related to qualifications obtained by an individual. As such, scholars defined skills development as allied to a qualification that involves individuals executing a task at a particular level of proficiency (Majama & Magang, 2017). Similarly, Hickey (2017) states that skills development is a condition of a job, which can be viewed as a constituent of the task. Furthermore, Mohapi

(2011) notes that skills development is concerned with ensuring employees have the knowledge and skills they require to perform their jobs – no less and no more.

Sousa & Rocha, (2017) contend that skills development is viewed in terms of the capabilities required to perform a particular task and the knowledge, skills and abilities that an individual acquires as a result of performing the task. In their definition, Sousa & Rocha, (2017) link skills development with the resulting outcomes involving change in employee behaviour and attitude. Similarly, Jeet (2014) highlights that employee training has positive consequences such as motivation, satisfaction, and improving organisational performance. As such, this research adopts this definition as it assumes that skills development will have a profound influence on employee performance, such as increased innovative behaviour.

3.3 Skills Development: The Global View

Several countries have undertaken skills development initiatives to have a competitive workforce. Industrialised nations such as New Zealand, United Kingdom (UK), Singapore and Australia have worked out generic skills their employees would require for them to be competitive both currently and in the future. For example, UK through the National Council for Vocational Qualifications (NCVQ) developed the work on core skills initiative whilst New Zealand established its skills strategy as part of the national curriculum (Samuel, 2010). South Korea had its skills programme tailor-made to support its emerging economy. The recognition of the importance of skills development by industrialised nations suggests that skills development is no doubt essential for economic growth. As such, significant investment in skills development should be prioritised in order to promote organisational development. Tan (2013) contends that successful implementation of skills development programmes by industrialised economies should serve as a reference point for emerging economies from which legislation and policies aimed at addressing skills development programmes can be derived. The section below discusses the skills development systems adopted by different economies.

3.3.1 Skills Development in Singapore

Singapore is one developed nation with economic growth premised on successful human resource development (HRD). The country is one of the most industrialised nations in the world, mainly because of its emphasis on investment in skills development (Khilji & Schuler, 2017). To date, the country is a global centre for industry, finance and communication due to its strong focus on HRD (Tshilongamulenzhe 2012). Keating (2009) highlights that one of the reasons why the country has been able to reap the benefits of skills development is because of

its strong linkage to its industrial development needs. Consequently, the country has been able to supply what the industry requires in terms of skills requirements.

The successful skills development system in Singapore is attributed to five fundamental characteristics. The first of these characteristics is the tight fit between skills development policies and economic development strategies (Tshilongamulenzhe, 2012). The country's human resource policy is crafted in such a way that the skills required for successful implementation of each economic development strategy are provided. With that, the skills development programme is crafted in line with the essential aspects of economic development needs. Studies have indicated the significance of linking skills development and economic development strategies in the institutional structure, which allows for a close link between the education system and industry and commerce (Kuruvilla, 2007; Kuruvilla, Erickson & Hwang 2002 & Tshilongamulenzhe, 2012). This fundamental aspect is one of the reasons why most developing economies fail to reap the benefits of skills development as the responsibility for economic growth rests on commerce and industry ministry whereas skills development is under the education ministry. With these ministries having no relationship, it isn't easy to achieve economic growth. Similarly, Kuwaza (2017) alluded to the fact that in spite of Zimbabwe having high literacy levels, the country is facing shortages of critical skills essential skills that steer business success.

The second characteristic is the foreign direct investment, skills and technology transfer model. This model emphasises the provision of incentives to foreigners who together with the collaboration with the government establish centres for training (Kuruvilla, Erickson & Hwang, 2002). The government would, in turn, guarantee the foreign investors a certain percentage of these graduates from the training institutions to work for foreign investors. According to Kuruvilla (2002), the training centres would ensure a constant supply of skills to foreign investors. Nonetheless, as the country continued to experience economic growth, these centres were later turned into large institutions. The training centres that were established did not only generate short term skills; they also became centres for transferable skills. This was achieved through harnessing expertise from foreign companies (Kuruvilla *et al.*, 2002). The investment, skills and technology transfer model of foreign investment is encouraged for developing economies such as the Zimbabwean economy. This idea will help the country produce a high calibre workforce, which is competitive in the global market as the foreign investors bring with them high levels of expertise and technology.

The third characteristic was the formation of a Skills Development Fund (SDF). The SDF is the way the government developed to encourage all organisations in the country to invest in skills development (Kuruvilla, 2002). Under the SDF employers are required to contribute 1% of employee earnings for those employees earning \$1 500 per month. In turn, organisations would regain 80 per cent of their support through grants for employee development. Furthermore, the SDF provides that organisations offering training for skills in demand or have employee development plans that cover 50 per cent of their workers are awarded a high amount of grants. In contrast, organisations that continue to use low skills are penalised by paying a huge fine to the government.

The SDF has been adopted by many countries including South Africa and Zimbabwe. In South Africa the Skills Development Levies Act 9 of 1999 enforces a skills development levy to encourage learning and development. The levy is collected as 1 per cent of the total amount paid in salaries to employees (Naong, 2009). In Zimbabwe, the fund is called the Zimbabwe Manpower Development Fund (Zimdef). The fund is financed by all formally employed employees who contribute tax. The collected funds finance the development of apprentices. Singapore, through the SDF, introduced the National Training Awards (NTA) that perform well in terms of employee development (Kuruvilla *et al.*, 2002). Adoption of such initiatives can reinforce commitment by organisations to employee development as they can notice that their efforts are being recognised.

The fourth characteristic is the long-term skills development policy. This also saw Singapore reviewing its education system. Formal education was divided into two streams (Samuel, 2010). The first ten years of the new education system consists of general education under which the academically gifted students follow the academic route. Those who take the academic route are first enrolled in junior colleges before being admitted into universities. While those who take the technical path are admitted into vocational training institutions (Samuel, 2010). This system is almost similar to the one implemented by Zimbabwe in which the first ten years are of general education. However, the difference between the two countries is that in Zimbabwe more students are now enrolling in universities in comparison to technical institutions. This could be attributed to the relaxed entry requirements by universities because of competition for students. The reduced number of learners registering in vocational training institutions and relaxed university entry requirements could also be the difference between the calibre of graduates produced by these institutions in comparison to graduates they used to

produce before the turn of the previous decade where Zimbabwe's technical skills workforce was regarded as one of the best in the world.

The fifth characteristic focuses on the structure of institutions that support practical skills development in the country. The Education Development Board (EDB) became the architect of the foreign direct investment, skills and technology transfer model (Kuruvilla *et al.*, 2002). This board, in conjunction with other organisations like the Productivity Standard Board (PSB), Institute of Technical Education (ITE) and Precision Engineering Institute (PEI), are responsible for meeting the skills demands of foreign investors. Also, the structure of these boards consists of representatives from employers, employees and government to ensure that the skills development initiatives in the country remain focused and relevant. In addition, several industry-specific bodies including the Financial Industry Competence Framework (FICF) were launched to support skills development in each industry. These initiatives focused on identifying the skills needs of each sector (Singapore, 2010).

Many emerging economies such as the Zimbabwean economy can adopt the skills development system implemented by Singapore. Tan (2013) argued that the skills development system implemented by Singapore is imperative in that it assists people in moving quickly into new jobs, thus reducing the skills shortage in the country. Furthermore, a stronger collaboration between industry and skills supply is a means to a robust economy as chances of skills mismatch are minimised. These far-reaching implications highlight the need for emerging economies such as Zimbabwe to invest considerably in skills development initiatives to recognise significant economic growth.

3.3.2 Skills Development in India

Similar to Singapore, the government of India recognised the importance of skills development to drive its social development and economic growth. Before 2009, the skills development system in India had a few connections with government policies and had limited uniformity of purpose (Tshilongamulenzhe, 2012). The system was disjointed with replication in the provision of training and development (T&D). The country did not assess how education and training, together with HRD policies were coordinated (Tshilongamulenzhe, 2012). The Financial Intermediary Controls and Compliance Assessment (FICCA) Report (2014) states that the education system in India lacked global relevance and competitiveness. This was shown by the low employability levels of graduates, low impact research output and the low number of patents filed by its graduates.

The fragmented education system in India in 1992 led to massive structural and systematic changes in the education system (Singh, 2017). This followed the realisation that for India to be competitive globally it needs to be prominently placed on the global higher education map, and needs to act as a hub for talent that is for both the Indian and international markets, and to ensure a culture of research, entrepreneurship and innovation significant enough to power global economies (FICCA Report, 2014). Furthermore, the government also realised that there was a transition in global employment where sophisticated workers, entrepreneurs, innovators and thinkers now survive in a globally connected and dynamic economy. In essence, with the realisation that employment will drive economies, India in 1992 had to realign its skills development system for it to be competitive, and this saw the introduction of a planned differentiated university education system.

India's higher education system has been through rapid transformation and expansion over the past twenty years. The country went through a structural change, which saw the tertiary education system moving to a differentiated academic system consisting of a three-tiered structure (FICCA Report, 2013). The structure has high-quality colleges at the bottom followed by specialised institutions and comprehensive universities in the middle and high elite universities at the top. The education system is organised in a way that the bottom and middle tier focused on delivering social and economic value and the upper-tier focusing on advancing India's intellectual capital (Tremblay, Lalancette & Roseveare, 2012).

The elite research universities are regarded as centres of excellence, which focus on developing new knowledge, furthering intellectual property and national and international leaders in research output (FICCA Report, 2013). In these elite universities, only talented and research-oriented students would enrol, and these are taught by stellar faculty. Furthermore, the stellar students and faculty would attract research grants and show greatest international diversity. Despite these universities educating just a few students, they have also become a source of content and curriculum for other students who have access to content from these institutions through online platforms (FICCA Report, 2013).

The middle tier institutions focused on producing industry-aligned professionals. These institutions focused on quality teaching and on producing employable graduates. These institutions are seen as a gateway to white-collar jobs by creating problem solvers, critical thinkers and produce graduates with high technical knowledge. To remain competitive, these institutions also draw faculty from industry and experienced practitioners who are subject

matter experts. The lower tier is designed to provide tertiary education to all eligible and deserving students in the country (FICCA Report, 2013). These institutions promote equity and access by providing holistic education to India's masses. Furthermore, these institutions also offer online teaching and learning and enrol a sizeable number of students.

The differentiated education system in India ensures that students have access to tertiary education depending on their talent (Brooks, 2018). It also encourages students' commitment to learning so that they can move from one tier to another. Also, the differentiated system ensures that all students are provided with different skills, which play a significant part in driving the economy (Brooks, 2018).

Apart from the differentiated tertiary education system, India is also moving to a learner-centred education approach. The old system had the student as a passive player with a predefined learning pathway (FICCA Report, 2013). Nonetheless, as stated above the new system in India has the student being an active participant in the education process, where students are encouraged to take responsibility for their learning outcomes. Also, in this approach, learners are encouraged to participate in knowledge discovery actively. They are also encouraged to be thoughtful learners, reflexive and to learn from their peers and immediate environment. Researchers claim that successful learner's participate in making sure that their requirements are met and sustained over time (Setiyadi, Sukirlan & Mahpul, 2016; Alghamdi, 2016). Others advise that individual accountability results in life-long learning by overcoming the various challenges inherent in developing deeper and more meaningful learning opportunities over time (Jiusto & DiBiasio, 2006; Deveci & Ayish, 2017a;). Thus, being accountable for your own learning is vital for personal, academic, professional growth and success (Ning & Downing, 2012).

3.3.3 Skills Development in Denmark

Denmark is another country that has implemented a successful skills development system. The skills development system in the country is divided into two categories. This includes the basic mainstream education system and the adult education and continuing system (Cedefop 2012). Combined, these two education systems form a framework for lifelong learning. The mainstream education system is considered as basic education and it is comprised of primary and lower secondary education. The basic education is deemed to be compulsory and is from the age of six (preschool) to sixteen (ninth grade) (Cedefop, 2012). After ninth grade, learners may decide to enrol into the upper secondary education or to continue with an optional tenth

grade. The tenth-grade option is intended for learners who require further academic competence and clarification regarding their future choices before entering into either general or vocational upper secondary education.

The upper secondary education system is made up of the general upper secondary and vocational upper secondary education and training. The general upper secondary education is considered preparatory for tertiary level education with the vocational upper secondary education and training focusing on commercial, agricultural, technical, healthcare and social programmes (Cedefop, 2012). The vocational upper secondary education and training starts at the foundation stage where students are required to be college-based for a period ranging from twenty to sixty weeks before having a contract with an enterprise. The vocational upper secondary education and training system can be likened to the apprenticeship programme in Zimbabwe where students are required to enrol at technical institutions during the first weeks of the programme before they join enterprises. In Zimbabwe, this system has produced graduates who are valuable to the economy as they possess the necessary skills and experience.

The adult education and continuing education and training system consists of three programmes at the upper secondary level. These programmes include basic vocational adult education, higher preparatory single subjects, and adult vocational continuing training programmes. The target group for the basic adult vocational education include those with low skills but who possess up to two years of relevant work experience. The higher preparatory single subjects being targeted to adults who require complementing an existing secondary level qualifications to enter a higher education programme. The adult vocational continuing training programme is meant to equip both the skilled and unskilled workers with specific work-related skills (Cedefop, 2012).

Higher education in Denmark is broadly divided into two categories: the short and medium cycle professional-oriented programmes and the research-based long cycles. On the one hand, the short and medium cycle programmes lead to a professional bachelor's degree qualification. Professional bachelor's degree programmes require up to four and a half years to complete with a strong emphasis on profession practice (Field, Galvan, Henard, Kis, Kuczera & Musset, 2012). The professional bachelor programmes equip students with theoretical knowledge and its application. The qualification takes place at university colleges and contains six months of workplace learning (Danish Agency for Higher Education and Educational Support, 2012). On the other hand, research-based long-cycle programmes involve students enrolling for a

postgraduate degree programme usually a master's programme. Student can only enrol for postgraduate qualification after successful completion of the professional bachelor's programme. Postgraduate qualification contains a research component within a particular field of study.

The skills development system in Denmark has its strengths. According to Field *et al.*, (2012) the skills development system Denmark has more robust institutional structures that support learning. The system is well structured, and it supports learning. Further, workplace training is compulsory for all organisations and employees. The skills development system also seeks to update employee skills by providing parallel adult education for those who seek to update their skills. Lessons can be drawn from the skills development system in Denmark.

3.3.4 Skills development system in Zimbabwe

The skills development system in Zimbabwe consists of general and tertiary level education. The general education consists of primary and high school education while a number of strategies are adopted to proffer tertiary level education.

3.3.4.1 General Education

Zimbabwe's education and training system is divided into general education and tertiary education (Shereni, 2020). The education system was adopted from the British education system in 1980 as Zimbabwe was once a colony of Britain. The general education includes primary level education up to high school level. Primary level education begins from the early childhood development (ECD) education to grade seven (Majoko, (2018). After grade seven, students enrol for secondary level education, which consists of an initial four years ('Ordinary Level') and can be extended with a further two years ('Advanced Level'). During the 'Ordinary Level', students take subjects mostly without specialisation, and when they pass them, they then enrol for 'Advanced Level'. Under 'Advanced Level' students take specialisation subjects in sciences, business and arts in preparation for tertiary education at colleges, polytechnics and universities (Shereni, 2020). Students who fail or may choose not to proceed to the 'Advanced Level' may enrol with Technical and Vocational Education and Training colleges and other colleges for various specialisation courses but will earn a lower certificate level (Shereni, 2020). Those who enter for 'Advanced Level' can be admitted into universities after satisfactory passes and also have an option of enrolling into colleges depending on what they would want to specialise in.

3.3.4.2 Skills development strategies in Zimbabwe

In an endeavour to bridge the skills gap between what is required by industry and the labour market several skills development initiatives have been adopted in Zimbabwe. These initiatives include Technical and Vocational Education and Training (TVET) system, Internship/Work Related learning and Graduate Trainee programmes.

3.3.4.2.1 Technical and Vocational Education and Training (TVET) system

TVET system constitute training, education and skills development related to a variety of job-related fields (UNESCO GC 2015). Technical and Vocational Education and Training learning can transpire at the high school level, tertiary levels and is continuing training development that may result in qualifications. Also, TVET includes an array of skills development initiatives related to local and national contexts. Such skills development initiatives include development numeracy and literacy skills, citizenship and transversal skills (UNESCO GC 2015). According to Green (2014), the process of TVET involves training by both institutions and the service and productive sectors. As a result, the TVETs produce skilled employees, technologists, technicians, scientists and engineers who serve the deferent sectors of the economy. Mupondi & Munyaradzi (2013) allude to the fact that TVET skills are imperative for economic development and as they will provide young people in the country with pertinent skills that will make them more employable.

Technical and Vocational Education and Training plays an essential role in the development of employee skills in a country. Brewer & Comyn (2015) argue that skills development through TVET contributes significantly to the development of important skills for employability. They further argue that demand-driven TVET skills development is imperative for equipping employees with the skills they require. Green (2014) also contends that TVET produces specialist practitioners for different sectors of the economy, including the service and productive sectors, both formal and informal sectors of the economy. Green (2014) further alludes to the fact that TVETs produce innovative graduates, leaders, problem-solvers and employment creators. Therefore, the availability of such graduates in large numbers in a country has a direct influence on how the country grows. Also, they are regarded as an essential factor that makes a practical difference between developed and industrialised countries and less developed and under-developed countries.

3.3.4.2.2 Technical Vocational Education and Training system in Zimbabwe

The Zimbabwean government, through its Ministry of Higher and Tertiary Education has been making impressive efforts to encourage TVET. According to Dube & Xie (2018) in Zimbabwe, vocational skills training centres, teachers' colleges and polytechnics have been made to have their curriculum developed to train technical skills while most universities provide general education. Tshabalala & Ncube (2014) highlight that TVET is also accessible at the secondary school level, where schools have vocational and technical subjects offered to students.

According to Woyo (2013), focus has been on Competence-Based Education and Training (CBET) and Modular Based Training (MBT). To increase innovative competences, the Ministry of Higher and Tertiary Education created the Standards Development and Research Unit (SDERU) in 2011 to lead training on innovative skills in certain occupational profiles as prescribed by industry (Woyo, 2013). Thus, efforts are being made to ensure quality in the TVET system in Zimbabwe. Ensuring quality TVET should contribute positively to the socio-economic development of the country. Similarly, Mupinga, Burnett & Redmann (2005) argue that the demand for TVET is driven by the economic goals and the resulting income that goes to those organisations and nations that have quality or superior skills and knowledge (Mupinga *et al.*, 2005). As much as education is regarded as the key to unlock national development, TVET is seen as the significant key to economic and national development (Makochekanwa & Mahuyu 2021).

In an effort to promote technical skills a number of governmental institutions in Zimbabwe were turned into TVET institutions. All polytechnics and other government colleges were turned into TVET institutions. Furthermore, in Zimbabwe, TVET institutions have been given the responsibility to design suitable learning methodologies required to carry out learning required effectively to satisfy specific competences and industry needs. Thus, there is an interdependent relationship between TVET institutions and industry.

The TVET system in Zimbabwe is going through changes. The government is making the system responsive to MBT and CBET education and training. This initiative was adopted to ensure quality training from TVET institutions. The argument for undertaking the changes was that a quality TVET system contributes positively to socio-economic development outcomes of the country. In China, the TVET system plays a critical role in enhancing sustainable growth. Technical and Vocational Education and Training institutions are the main sources of employees leading at the forefront in handling sustainable issues (Paryono, 2017)

A number of challenges have been attributed to the delivery of successful TVET systems. Among them is lack of equipped workshops and training materials for TVET training. In a study conducted by Woyo (2013) in Zimbabwe, 80 per cent of the participants indicated that TVET institutions did not have the capacity to have the equipped workshops necessary for TVET learning and also the required training material to produce competent graduates. As such, the research noted that lack of learning material and workshops compromised the quality of graduates that are produced by most TVET institutions. Dambudzo (2013) echoes that the lack of structures and equipment required in TVET workshops to cater for practical activities like sciences, metalwork, wood technology, food preparation and many others is therefore making TVET institutions in the country to put more effort into theoretical aspects of learning at the expense of practical aspects. The theoretical training does not yield the expected competences required by industry.

In addition, another challenge affecting delivery of TVETs is the use of outdated training equipment which is not attuned to the present industrial practices. The obsolete equipment used does not assist in producing graduates with the requisite skills for the various industries in the country. Also, many of the TVET institutes in Zimbabwe lack training facilities such as classrooms, garages, workshops thus negatively affecting the drive to improve TVET learning. Woyo (2013) further argued that these challenges are exacerbated by bureaucracy and poor procurement systems a weakness that is most common in government institutions.

Moreover, lack of synergy between academia and industry is affecting the success of TVET institution. Paryono, (2017) argued that there is a big variance between what is taught in most TVET institutes and what the industry requires. This is further aggravated by the poor exposure available to TVET trainees when they receive on the job training mainly due to the poor performance of most organisations due to the poor economic conditions currently characterising Zimbabwe. Woyo (2013) also argued that there has been insufficient research and innovation coming from TVET institutions which is a critical element in driving competence-based education and training. This is mainly because research and innovation in TVET institutions has been disorganised. This affects the competences and the quality of graduates that are produced by these TVET institutions.

The current economic challenges characterising Zimbabwe have impacted negatively on the TVET system in the country. Currently, there are shortages of resources for learning and this has negative influence on the skills ability of graduates. Woyo (2013) further argued that TVET

institutions have not attracted meaningful learning equipment to their sites. As such, this affects the quality of skills and competences of their students.

The business environment is ever-changing and the pace of change in technology has increased tremendously. Customers are now demanding customised goods and services. Moreover, organisations have been forced to change their business priorities to meet these changes. Due to these changes in the market TVET institutions have fallen behind the needs of the industry. Reddan & Harrison (2010) contend that there is a need to restructure TVET institutions constantly so that their programmes are more receptive of the requirements of the business environment. In this regard, the TVET curricula should centre on the attitudes, skills and knowledge required by industry thus meeting the industry goals.

3.3.4.2.3 Internship/Work-Related Learning

Internship is another skills development strategy used in Zimbabwe. In Zimbabwe internship is used interchangeably with work-related learning. According to Renganathan, Abdul Karim & Chong (2012) internship is a chance given to learners to integrate knowledge learnt from school and on-the job work experience in a planned and supervised real-world professional work environment. Similarly, Robinson, Ruhanen, & Breakey (2016) contend that it is a practice-based learning experience that is essential in bridging classroom-based learning and real-industry experience. The main objective of internship is to incorporate knowledge learnt in class and the reality of the working environment to make the learners more employable.

There is a general consensus in organisations on the significance of internships in realising a complete and comprehensive education during university studies (Collet, Hine & Du Plessis, 2015, Rouvrais & Saveuse, 2018). Many benefits result due to learner internships. According to Marinakou & Giousmpasoglou (2013) internships help learners prepare for the industry by providing them with the chance to comprehend the working environment and to grow relationships with those already employed. This provides learners with the confidence and ability to work with others, to gain an understanding of the industry and to improve on their adaptability to change.

Internships increase the employability of learners. Yang, Cheung, & Song, (2016) argue that internships are the most useful among experiential learning activities that enhance learner employability as it bridges the gap between employment demands and education. Research has revealed that internship has important benefits in enhancing employability among learners (Ishengoma & Vaaland, 2016; Qenani, MacDougall, & Sexton, 2014; Jack, Stansbie, &

Sciarini, 2017). For example, Ishengoma & Vaaland, (2016) in their study found that learners reported being 2.5 times more assured of their employability as a result of going through an internship programme. Furthermore, Qenani, MacDougall, & Sexton, (2014) argue that internship enhances a learner's chances of getting a job and organisations generally like graduates with previous internship experience. Also, Jack, Stansbie, & Sciarini (2017) found internship as enhancing management competences in learners, which set them up for career progression, salary increases and job satisfaction. Thus, internships impact positively on the lives of learners.

Also, internships provide learners with an opportunity to gain insight into their professions and to make educated decisions about career opportunities obtainable to them (Wang, Chiang *et al.*, 2014). They also provide students with access to different organisations thus bringing various professions to student awareness at the same time allowing them to test out their career interests and to come up with career decisions. (O'Neill, 2010). Therefore, internships allow learners to work in their preferred fields assisting them to decide whether it is right for them or not. In other words, internships provide a path for learners to familiarise themselves with the field they are interested in. Satisfaction with internship assists learners with post-graduation career forecasts thus suggesting that satisfaction with internship prepares learners for their entry into industry (Stansbie, Nash & Chang, 2016).

Yang, Cheung, & Fang (2015) contend that employers are conscious of the benefits of effective internship programmes. Most graduates often fail to meet the skills requirements needed by organisations. As a result, many employers prefer employees with prior internship training because of their employability skills. Finch, Hamilton, Baldwin, & Zehner, (2013) reiterate that employers benefit from the internship programmes in that they aid learners in displaying their attitudes and competences thus organisations benefit by having a well-trained skilled workforce which adds to market success. Walker (2011) argues that internships provide employers with opportunities to assess potential long-term employees without long-term commitments. Walker (2011) further contends that internships assist employers when recruiting as their experience provides employers with better recruiting decisions. When employers hire employees who have passed through internships there is reduced turnover because the employees would have adjusted to the work environment and will experience less cultural shock.

Researchers have argued that internships are valuable in generating interpersonal and soft skills including cultural sensitivity, teamwork, customer management skills and professionalism (Maertz, Stoeberl, & Marks 2014; Galloway, Marks, & Chillas, 2014; Holyoak, 2013). Moreover, internships provide the opportunity to acquire competences that reinforce self-efficacy, which impacts positively on entrepreneurial intent required by organisations (Shoenfelt *et al.*, 2013). Nonetheless, as much as organisations view these skills as imperative for their success such skills may not be learnt in class but only through real work experience. Also, during internships learners are given the opportunity to refine their skills sets. Learners get to learn from real work colleagues and are given the opportunity to ask probing questions whenever and wherever they require clarity. Furthermore, learners benefit from feedback received from supervisors and colleagues who have established themselves in the field. Thus, internships provide learning opportunities that one may not get whilst at school.

Internships provide learners with the opportunity to network and learn from people who will be surrounding them. Domholt (2018) argues that anyone an intern interacts with while on internship becomes a potential contact when the learner is job searching or looking for a professional reference. In their study, Cook *et al.*, (2004) discovered that learners believed their internships assisted them to learn to work with a variety of people from different work environments and this experience helped them to become mature, get along with others and relate knowledge learnt in the classroom to the work environment. Dobratz *et al.*, (2014) argue that the formation of social networks arising from internships are a potential key benefit in the entrepreneurial sector for internships. Such networks may be used for sharing knowledge and can assist employers to identify opportunities as well as to find access to resources needed to take advantage of the possible opportunities. If networking provides such benefits to interns and employers, then internships should be encouraged in organisations.

3.3.4.2.4 Graduate Trainee Programmes

The need to be competitive has encouraged many organisations to finance skills development of their employees. Wakapala & Juma (2016) claim that organisations have accepted that to be competitive they should have well-trained employees that possess skills and technical knowhow, which enhance organisational growth thus increasing the survival chances in the market. Heathfield (2014) argues that having the right skills development strategy at the right time benefits employers with increased contribution, productivity, knowledge and loyalty. Therefore, organisations should have the right skills development strategy in place to maximise

on employee contribution. The graduate trainee programme is one skills development strategy used by many organisations in Zimbabwe to ensure the availability of skilled employees.

The graduate trainee programme involves employers taking fresh graduates from universities and colleges and offering them skills training before considering them for permanent positions. This initiative came after the realisation that most graduates are ill-prepared in terms of workplace proficiencies required by employers in the job market. A study conducted in East Africa revealed that close to 50 per cent of graduates from universities are not prepared for the job market because they lack basic skills essential for the job market. Thus, employers were complaining that recent graduates are incapable of converting the theoretical knowledge learnt in class into what is required by their employers (Yusuf, 2014; Ihucha, 2014). Also, Dathan (2013) claims that a survey of graduate employers revealed that more than 50 per cent agreed that only a few graduates are work-ready mainly due to lack of basic attributes like communication skills, punctuality, teamwork and ability to cope under pressure. The lack of basic work proficiencies makes graduates less competitive in the labour market because of gaps in their training (David, 2013).

The gap between what is required by employers and what is produced by training institutions suggests the need for a formation of a close relationship between the two parties where they both compliment each other in terms of what is required by the labour market. The graduate trainee programme is a strategy used by many employers to bridge the gaps in the skills proficiencies they require. Wakapala & Jimu (2016) argue that the graduate trainee programme is meant to equip newly qualified workers with the requisite skills wanted at work. Avrabos (2005) states that the objective of the graduate trainee programme is to create skilled professionals who can integrate with the organisational culture without difficulties, and who acquire the necessary skills required for optimal performance and development into future business leaders.

Wakapala & Jimu (2016) argue that the challenge for many nations such as Zimbabwe is to make the graduate trainee programme successful. They argue that when graduate trainees leave the programme no tracking is done to verify whether or not the skills they acquired during the graduate programme gives them significant leverage over others in the labour market and that this leads to better organisational performance. Moreover, graduates are placed into ‘cookie-cutter’ programmes that did not take into consideration their strengths and weaknesses to develop a training programme (Wakapala & Jimu, 2016). Additionally, lack of university-

industry partnerships to develop ways to communicate what they require from graduates apart from the content that is taught in classrooms (Avrabos, 2005). Thus, it is essential to identify the skills development requirements for the graduate trainees and to incorporate them into the training delivery modes to ensure the intended outcomes of the training programme are achieved.

3.3.5 Government initiatives on Skills Development

The government of Zimbabwe introduced a number of skills development initiatives. This was introduced mainly to improve the skills levels in the country and also to merge the industry requirements with the skills training provided by different training institutions. Among these initiatives is the National Critical Skills Audit (NCSA), Education 5.0 and the Zimbabwe Qualifications Framework (ZQF).

3.3.5.1 National Critical Skills Audit in Zimbabwe

In 2018 Zimbabwe conducted a National Critical Skills Audit (NCSA). The aim of the audit was to develop a national skills development plan meant to empower workers with the necessary capabilities that will contribute to the growth of the country. The audit acknowledged that for Zimbabwe to attain the desired economic growth and to address social challenges such as unemployment, inequality and poverty the country needed to invest in appropriate skills and knowledge demanded by the 21st century markets. Therefore, to achieve the economic growth trajectory the country needs capable and skilled employees.

Murwira (2018) states that the skills audit provided the basis upon which the country's existing skills and gaps could be determined thereby permitting the identification of specific employee development initiatives and prioritisation of training and education required for modernisation and industrialisation and goals. In other words, the skills audit provided a pragmatic way of determining the skills gaps, redundancies, shortages and emerging technological trends so as to refocus employee training and planning for generations to come. Thus, the audit report acknowledges that Zimbabwe's challenges require an evidence-based approach and reliable data on the quantity and quality of its existing skills levels. Such credible data is essential for planning, policy formulation and evaluation of the impact of human capital strategies and interventions. Therefore, the NCSA was an important step in determining the critical skills sets essential for economic growth.

Since the attainment of independence in 1980 Zimbabwe has produced outstanding individuals who have contributed immensely locally, regionally and internationally. This could be

attributed to the national skills development efforts made by the government, which were to develop a sustainable workforce that would enhance the country's competitiveness internationally (National Critical Skills Report, 2018). Initially, the government's thrust was to increase the capital base of technicians and artisans but further established science and technology institutions such as Harare Institute of Technology National University of Science and Technology, Chinhoyi University of Technology, and Bindura University of Science Education. With a view to modernise and industrialise the government also established strategic research institutions such as the Scientific and Industrial Research and Development Centre (SIRDC), Research Council of Zimbabwe (RCZ), and the National Biotechnology Authority of Zimbabwe (NBAZ).

The skills development initiative by the government of Zimbabwe also acknowledged the need to embrace and respond proactively to information and communication technologies (ICTs). This saw a computerisation drive in primary, secondary and tertiary education institutions. Murwira (2018) states that the expansion of the education sector saw Zimbabwe producing specialist doctors, pharmacists, biochemists, information communication experts, engineers and other specialists who have taken up positions regionally and internationally.

The National Critical Skills Report (2018) acknowledged that Zimbabwe needed to review its skills status in order to catch up with the changes in the global economy. The report recognised that if Zimbabwe does not change its skills function it endangers the economy and it will remain stagnant. As such, the supply side of skills in the country needs to be reviewed constantly mindful of the current changes in the global market which will enhance the required modernisation and industrialisation.

3.3.5.1.1 National Critical Skills Survey Results

A survey was conducted to determine the critical skills required by Zimbabwe. The critical skills were divided into six categories which are: Natural and Applied Sciences; Engineering and Technology; Medical and Health Sciences; Applied Arts and Humanities and Agriculture; and Business and Commerce. The results indicated critical skills shortages except for business and commerce as shown in the table below.

Table 4.1: Nation Critical Skills Report 2018

Sector	Availability	Surplus/ Deficit
Natural and Applied Sciences	3.09%	-96.91%
Engineering and Technology	6.43%	-93.57%
Medical and Health Sciences	5%	-95%
Business and Commerce	121%	21%
Applied Arts and Humanities	82%	-18%
Agriculture	12%	-88%
Average	82%	-61.75%

Source: National Critical Skills Report (2018)

The table above shows the critical skills available in Zimbabwe. The positive percentage indicates a surplus while negative percentage indicates deficit. The analysis was done using Economic Co-operation and Development (OECD) measures which factored in GDP, GDP per capita, population, average OECD GDP per capita and weighted GDP contribution to employment which was contextualised to meet Zimbabwe.

The results indicated that except for Business and Commerce, which had a surplus of 21 per cent the other categories of skills had negative percentages indicating skills deficits. Most of the categories indicated critical skills shortages. The Natural and Applied Skills category had a deficit of -96.91 per cent Engineering and Technology -93.57 per cent Medical and Health Sciences -95 per cent and Agriculture -88 per cent. Nonetheless, Applied Arts and Humanities had a modest deficit of -18 per cent. The Business and Commerce skills category had a positive 21 per cent thus indicating a surplus in terms of skills. The results thus indicate that for Zimbabwe to realise modernisation and industrialisation a lot must be done to turn the deficit in terms of critical skills into positives. This can only be done however through significant investments in training and developing of the human capital in the country.

3.3.5.2 Education 5.0

Although Zimbabwe has a vision of becoming a middle-income economy by the year 2030. The country needs too much to improve itself. Zinyama (2021) argues that it is important for Zimbabwe to improve in governance, industry capacity, combating corruption, public administration, and reconnecting the citizens with the government. To improve the industry capacity the country has acknowledged that it has to address the skills needs of its employees and to develop a knowledge economy through improving employee skills, technology and entrepreneurship. Therefore, the quality of Zimbabwe's employees largely depends on the role

tertiary education institutions play in the country. Murwira (2017) states that Zimbabwe now aims at developing an education system that generates knowledge, which leads to the making of relevant products. This is in-contrast to the previous scenario where the education system seemed to concentrate on exotic application domains. Tagwirei (2017) concurred that the part played by higher education in economic growth through new knowledge is invaluable. Therefore, Zimbabwe should have a tertiary education system with strong links to its industry for it to be competitive globally.

To realise its goals of becoming a middle-income economy spearheaded by employees possessing relevant skills, Zimbabwe is moving away from its traditional tertiary education system, which mainly focused on three fundamentals which are teaching, research and community service. This system was previously termed Education 3.0. The current education system is now called Education 5.0, which added two additional missions, which are innovation and industrialisation (*Educational 5.0 Report, 2017*). The two additional missions were added to deliver a modernised, competitive and industrialised Zimbabwe. According to *the Education 5.0 Report (2017)* the tertiary education system in Zimbabwe should equip its graduates with relevant skills that empower them to be innovative through transformative science and technical knowhow that can deliver relevant products required by its society and the global market.

Education 5.0 implemented in Zimbabwe is centred on the Heritage Based Philosophy (HBP), which strives for the development of products through a heritage-based economy supported mainly by its natural resources (*Education 5.0 Report, 2017*). In other words, HBP seeks to produce goods and services through its environment. For example, Saudi Arabia's economy is based on a heritage of oil. Based on the heritage philosophy, Zimbabwe is trying to adopt an education system that imparts knowledge using the exploitation of its natural resources.

The Education 5.0 endeavours to restructure the tertiary education system to focus on five pillars, which include community service, research, teaching, innovation and industrialisation. These pillars focus on teaching that seeks to use the local environment to educate and learn. The learning system will make use of simple technology and ensure that:

- concepts are expressed in any local language;
- research and development ensuring bringing new ideas and innovations that will spearhead the competitiveness of the local goods and services;

- community service aiming at the development of the education community so as to ensure a competitive position among tertiary education institutions in Zimbabwe;
- innovation focused on linking the knowledge learnt in the laboratories, classrooms to industrial production;
- it focuses on the development of innovation hubs; and
- it advances industrialisation by making sure that innovation hubs exist and in turn that these hubs will ensure that prototypes developed are relayed into the industry where goods and services are produced.

The Education 5.0 Report (2017) further provides processes that should be adopted by the country and tertiary institutes in the country to ensure its success. To ensure the achievement of the Education 5.0 it is supported by a framework founded on four pillars, which are programme infrastructure, financing infrastructure, promotion infrastructure physical infrastructure.

- **Programme infrastructure**

According to the Education 5.0 Report (2017) the education system in Zimbabwe must be orderly and transparent such that it can be accepted by the outside world. To achieve this, Zimbabwe is premising its education system on a national qualifications framework that is guided by the Southern African Development Community (SADC) qualifications framework, a regional block made up of countries in Southern Africa. The education programmes to be studied shall be derived from the results of the NCSA, which was completed to identify the critical skills lacking in Zimbabwe. The audit revealed that there is lack of skilled employees in the agricultural sectors, technology and engineering sciences (Zimbabwe National Critical Skills Audit Report, 2018). The outcomes of the report are used to allow for prioritisation of education and training resources.

- **Financial Infrastructure**

According to the Education 5.0 Report (2018), the government of Zimbabwe realised the need to maximise quality education without overburdening the student, parent or guardian. To achieve this framework, the government adopted a tertiary education loan support facility to support students in paying for their tuition fees.

To succeed in the implementation of Education 5.0 a realistic approach involving input from all stakeholders is therefore required. This is essential in that it minimises any unforeseen

challenges thus ensuring the achievement of goals and objectives of the programme without too many obstacles.

- **Promotion Infrastructure**

This framework ensures that staff promotion and elevation in the tertiary education institutions is standardised in order to reduce variability in skills and competence levels of lecturers in the same pay grade but found in different institutions (Education 5.0 Report, 2017). The academic promotion grades are set from: junior lecturer; lecturer; senior lecturer; associate professor, and finally professor (Ministry of Higher and Tertiary Education, Science and Technology Development, 2018a).

- **Physical Infrastructure**

The physical infrastructure framework involves engaging investors to develop the necessary infrastructure required by tertiary institutions to ensure easy transference of learning. Such infrastructure can be acquired through:

- Build Own Operate and Transfer: The Build Own Operate and Transfer is also known as the Boot project. It involves a government giving a private sector organisation a concession to build a facility, own it, operate it and transfer it back to the government when the concession period elapses (Bakhteyari, 2007).
- The Build Operate and Transfer involves a financing partnership between a private sector organisation and government with parties involved receiving concessions on planning, design, execution, funding, and management of a project (Lekan, Opeyemi & Olayinka, 2013); and
- Private and Public Partnerships: which involves the private and public entities collaborating on a project.

In addition, the government of Zimbabwe is embracing the vision of university towns, contemporary housing infrastructure, shopping malls in universities, access to Wi-Fi and construction of innovation hubs with an aim of developing an inspiring learning environment suitable for nurturing talent.

3.3.5.3 Zimbabwe National Qualifications Framework

The Zimbabwe Credit Accumulation and Transfer System (ZIMCATS) laid the foundation for the development of the Zimbabwe National Qualifications Framework (ZNQF). The ZIMCATS is a framework, which focuses on academic credit arrangements in tertiary education in Zimbabwe. The ZIMCATS's mandate is to ensure a universal credit system for all tertiary education institutions in Zimbabwe. Its key goal is to ensure comparability of qualifications offered by all tertiary institutes and to facilitate student mobility between institutions (ZIMCATS, 2017).

The ZIMCATS laid the passage for the development of the ZNQF. National Qualifications Framework (NQF) is an instrument used to categorise different national qualification types. It is also used in the development, grading and recognition of knowledge, skills and capabilities along a range of agreed levels (Tuck, 2007). Samuel (2010) states that experiences from industrialised nations such as UK, Australia and New Zealand could have encouraged the adoption of NQF in developing Sub-Saharan Africa like South African, Ghana and now Zimbabwe. These countries have clearly laid out frameworks articulating the category in which a qualification falls.

In developing its NQF, Zimbabwe followed the SADC Qualifications Framework (SADC-QF), which is the regional qualifications framework. The SADC-QF works as a guiding point for educational systems in the Southern Africa region, and its primary function is to support student mobility within the Southern African region.

Samuel (2010) articulates that the NQF provides one reference point for learners, employees and employers of qualifications. It takes a unified approach to training and education, and informal learning institutions in the workplace. Apart from NQF supporting access to mobility within education, training, and career paths, it also enhances the quality of training and education in the country. Samuel (2010) further contends that the NQF provides the stage to continuous learning and development, which assists people with acquiring skills they can use throughout their lives. Wagner (2001) notes that the qualifications framework provides a set of guidelines and principles through which records of learning achievements can be registered to ensure national appreciation of acquired knowledge and skills hence ensuring an integrated system which encourages lifelong learning.

The embracing of the Zimbabwe National Qualifications Framework (NQF) by Zimbabwe in 2018 was a step in the right direction, apart from laying down a foundation for career path

(Zimbabwe National Qualifications Framework, 2018). It also provides a framework for access to mobility within training. Learners can now move easily between education institutions in Zimbabwe and also across the region as the NQF follow the regional qualification framework proposed by SADC.

3.3.5.4 Science, Technology, Engineering and Mathematics Project (STEM)

Chatate (2016) argues that one of the significant preconditions for socio-economic transformation and industrialisation in any country is the availability of a skilled workforce. The realisation by the government of Zimbabwe of the need to have more skilled people in the field of engineering, science, and technology led the government to introduce the Science, Technology, Engineering and Mathematics Project (STEM) project. The STEM project has been implemented in countries such as United States of America (USA). In USA the project is used to uplift women to take up courses in the science. In the USA, women studying in the STEM area have significantly increased from 28 per cent in 1970 to 50 per cent by 2015. These results indicate that women in USA have reached a percentage close to or greater than 50 per cent, as an indicator of the progress in the inclusion of women and an increase in diversity (Oliveros-Ruiz, 2019). In Zimbabwe, the STEM project was introduced in 2015 to promote the uptake of subjects in these fields by students. The idea behind this was to provide learners with knowhow that would see them contribute to economic growth, employment creation and actively contribute to both the local and global economy (Chatate, 2016).

The introduction of the STEM project also led to a review of the general education curriculum (Mberi & Phambili 2016). The new curriculum supports a competency-based learning approach, which encourages practical learning rather than the previous content-based approach. The content-based approach focused more on knowledge acquisition but with little emphasis on knowledge and skills application (Chatate, 2016). Ncube (2016) states that to achieve the objectives of STEM, the project was put under the Ministry of Higher and Tertiary Education, Science and Technology Development. This was to encourage students to take STEM subjects such as biology, mathematics, physics and chemistry after realising a noticeable decline of students who were taking pure science subjects such as social sciences and commerce. To comment on encouraging STEM subjects, Chitane (2016) states that by 2016 less than 17 per cent of those admitted to universities in Zimbabwe were taking STEM-aligned disciplines with many enrolling in social sciences and commerce. Nonetheless, the enrolment in arts and social sciences was seen as a move which did not support beneficiation

and value addition of Zimbabwe's natural resources, thus hampering the country's objective of extending the product value chain.

The STEM project was positively received by many people in Zimbabwe, and this saw more than 4000 students registering for the programme by 2016 (Katongomara 2016). Among those who were also registering were students from remote parts of the country. In return, the government paid full school and boarding fees for students under the STEM project who were excelling in their work (Ncube, 2016).

However, the success of the STEM project is likely to be impeded by some implementation challenges. The country is facing shortages of suitable teaching staff, and this is mainly to brain drain. Mukondiwa (2015) contends that the majority of STEM subjects teaching staff are moving to neighbouring countries where they are given lucrative contracts. Ncube (2016) confirms that by 2016 the country had a deficit of 1 521 teaching staff of science and mathematics. Additionally, staff development is not taking place at a rate at which it is supposed to be mainly because some of the qualified staff are unable to upgrade their qualifications due to financial constraints and other factors. Another impediment for successful implementation of the STEM project is the availability of learning facilities. Chere (2015) reported that there are limited teaching facilities for STEM subjects with some areas having deplorable conditions which are not conducive and compatible with the STEM curriculum. Similarly, Chitate (2016) contends that there is a lack of essential laboratory equipment required for most of the STEM subjects with most schools still using outdated STEM infrastructure from the post-independence era. As such, there is need for the government to invest significantly into the project to strengthen its implementation urgently.

The STEM project if implemented well, may bring desired results for the government of Zimbabwe. Nevertheless, the success of the programme depends significantly on how the authorities responsible for the project do well in strengthening its implementation. Moreover, there is need to invest significantly in the infrastructure required for the project, particularly in the remote areas where the facilities are in a deplorable state. The authorities responsible for the project also need to invest in the support staff of the project such as teachers who in turn will strengthen their commitment to the project. Lessons can also be drawn from countries who have successfully implemented the STEM project. This way, the government can see what it is getting right and wrong.

3.3.6 Factors influencing skills development

Continued change in the global market has resulted in skills deficiencies in many economies. Many factors can be attributed to influencing this deficiency. Included in these factors are emigration of skilled professionals, globalisation, technological advancement and ageing workforce. This section of the study explores these factors in detail.

3.3.6.1 Skills migration

The emigration of skilled employees has been a significant concern for both developing and industrialised nations (Kana, 2010). Developing countries are finding it challenging to manage this escalating problem effectively. Africa, in particular, is witnessing an exodus of highly skilled and competent workforce mostly to developed countries. Gurmessa & Wissink, (2019) argue that this problem has created a dire situation in the region in terms of education, science and technology and health care services and which is threatening the growth of both private and public sector service delivery systems. This massive exodus of skilled workers is primarily due to push and pull factors and is commonly referred to as the 'Brain drain' suggesting large scale exodus of skilled individuals to developed nations in search of improved opportunities (Kana, 2010; Gurmessa & Wissink, 2019).

On the one hand, the push factors are those factors, which cause the skilled workforce to leave their countries and search for a better life abroad while the pull factors are those that attract the employees. Osaretin & Eddy (2012) highlight that the migration of skilled employees is mainly caused by push-pull factors, particularly wage differentials and dissatisfaction will facilitate their intention to leave. Gurmessa & Wissink, (2019) state that the push factors include low salaries, low job satisfaction, poor working conditions, ethnic and political problems, civil strife and poor security, limited career development opportunities, and the lack of better facilities for families and children. On the other hand, the pull factors are those forces that attract people from their home countries, for instance, better remuneration, conducive work environment, career development and advancement opportunities and improved living conditions (Jauhar, Ghani, Joarder, Subhan & Islam, 2015; Nabawanuka, 2011; Gurmessa & Wissink, 2019).

Moreover, other factors such as Structural Adjustment Programmes (SAPs) effected by most African countries led to reduced workforce subsequently causing the emigration of skilled workers in countries like Nigeria and Zimbabwe (Osaretin & Eddy, 2012). Also, the mass exodus of skilled employees may be stimulated by the growth of social networks and

globalisation linking potential migrants with host countries (Awases, Gbary, Nyoni & Chatora, 2004; Moullan, 2014; Osaretin & Eddy, 2012). Other factors include ageing population in most developed countries, professional contacts developed during studying abroad and social pressures owing to large families (Gurmessa & Wissink, 2019).

According to Flahaux & Haas, (2016) there has been an increased number of Africans emigrating to Europe, Asia, North America and the Gulf. This situation is contrary to past events where migration used to occur within Africa. For the past twenty years, Africa has witnessed the movement of the working population to Organisation for Economic Co-operation and Development (OECD) countries (IMF 2016). In 2013 migrants from Africa amounted to a third of migrants in OECD countries (IMF 2016). For skilled workers including those with expertise in technology, engineers, academics and researchers and healthcare workers, it is projected that one in nine people born in the continent with a post-secondary qualification or university degree left to a country outside the African continent (Soergel, 2016).

A significant number (35%) of a skilled professional who migrated overseas for training do not return home with leading migratory flows originating from Sub-Saharan Africa. According to Kigotho (2013), compared to other continents, Sub-Saharan Africa is losing more skilled workers due to international emigration. A persistent and ever-increasing number confirms this situation over the years. Connor (2018) also confirms that Sub-Saharan African countries account for 80 per cent of the international migrant population since 2010. This indicates that a large number of the skilled and competent workforce in Africa is being lost thus reducing the socio-economic, technological and scientific growth of the continent (Osaretin & Eddy 2012; Moullan, 2014). African countries, therefore, need to improve their socio-political and socio-economic environments if they are to mitigate the increasing outflow of skilled talent.

3.3.6.1.1 Skills emigration in Zimbabwe

Zimbabwe is not spared among sub-Saharan Africa countries that have experienced unprecedented brain drain (Chimboza, 2012). Brain drain has affected both the quality and quantity of the country's human capital, particularly during the period 1999 to 2009 during the heightened period of political, and economic challenges. The period between 2018 to date has seen brain drain resurfacing again mainly due to the fall of the economy, and this has seen Zimbabweans migrating mostly to other Southern African Development Community (SADC) neighbouring countries such as Botswana and the Republic of South Africa (RSA) (Muyambo & Ranga, 2019). Among those leaving the country are skilled employees who seek to improve

their livelihood elsewhere. The need to have secure livelihoods through gainful employment abroad is the primary driver of Zimbabwean emigration (International Organization for Migration 2018). The exodus of skilled employees to other countries leaves a gap that is difficult to fill. The 2009 Public Finance Management system of Zimbabwe highlighted that due to an unprecedented brain drain, the remaining skills level for the country is not enough to cater for its needs and expectations (Gwangwava & Matsvai, 2014).

McGregor & Ranka (2010) states that just like any other country experiencing brain drain Zimbabwe's problem is due to the broader global, economic, political and cultural trends migrants all over the world seek to navigate. As such, the supply forecasting of people in an unstable economy are affected as the number of people who participate in the labour market is low due to job insecurity, retrenchments and low salaries (Hipple, 2010). Crush & Tevera (2010) contends that at some point in time, the majority of the skilled population in Zimbabwe thought of leaving the country, which represents high emigration potential. Emigration potential is an assessment of the likelihood that skilled employees will leave the country (Crush *et al.*, 2010). In a study conducted by Crush *et al.* (2010), the majority of the actual and future skilled Zimbabweans, 57 per cent of professional respondents had given a great deal of consideration to emigrating while 29 per cent had given it some attention. Further, the study showed that of those who had gone to work or to search for work 50 per cent were males while 10% per cent of females did the same.

Emigration of people can either be provisional or permanent and usually those with intentions to leave have an idea of when they intend to go and the duration of their stay. Although things may not happen as planned for those who eventually leave, the majority of Zimbabwe's potential emigrants want to leave permanently and do whatever it takes for things to work out well (Crush *et al.*, 2010). Crush *et al.* (2010), state that the majority of the skilled Zimbabweans mainly below the age of 40 expressed their desire to leave permanently with only a few (25%) expressing their desire to leave for a short period. These findings are worrisome particularly for economic development because they show that the vast majority of Zimbabwe's agile and skilled population intends to leave the country.

Zimbabwe emigrants are spread all over the world. Nonetheless, the most chosen destinations for most Zimbabwean emigrants are Europe, Asia, North America and Southern Africa. In these continents, the most popular destinations are the UK, Australia, New Zealand, Canada, USA, RSA, Namibia and Botswana. However, the most likely destination for most skilled

emigrants from Zimbabwe is the RSA. This is mainly because South Africa has a bigger economy, requires a skilled labour force and is closer to Zimbabwe. The immigration laws in South Africa are also less stringent in comparison to other neighbouring countries. Botswana also has a considerable number of Zimbabweans; this is also due to safety concerns in the RSA.

Skills emigration remains an economic challenge for both the private and public sectors in Zimbabwe. The country has become a centre for skills development for other countries. The government of Zimbabwe tried to reduce this problem by bonding some of the skilled employees in critical sectors such as doctors, pharmacists and nurses by retaining their certificates for a specific period such that they do not leave the country. Although many measures may be taken to mitigate this problem, the only solution is to improve the country's political and economic situation such that people can improve their livelihoods and see no reason to depart to other countries

3.3.6.2 Globalisation and skills development

Globalisation is another critical factor in influencing skills development (Mago, Musasa Matunhu, 2013). Globalisation is regarded as the increasing and interconnectedness and interdependence of the contemporary world through the increased movement of people, goods, services, capital, and information. The process is compelled by technological improvements and declines in the cost of international transactions, which spreads ideas and technology through raising the share of world trade production and intensification of capital mobility (UK Department for International Development, 2000). The definition of globalisation suggests an integration of global activities, thus making the world become one global market.

The increasing interdependence and interconnectedness of economies through globalisation has positive and negative effects on countries. In most developing economies, particularly in Africa, globalisation has more negative effects than positive. Globalisation has completely different consequences for skills development in low-income economies compared to western industrialised economies (Tikly, Lowe, Crossley, Dachi, Garrett & Mukabaranga, 2003). Globalisation has affected how jobs are being performed in contemporary society. In many advanced economies, for example, there is a shift from cognitive and manual jobs as they are replaced by automation or computers (Jensen & Kletzer, 2010; 2008; Goos *et al.*, 2014; Michaels *et al.*, 2014). With the increasing integration of economies, many of the labour-intensive jobs are being outsourced to developing countries. Furthermore, the workforce in

many developing countries is often less educated, which influences the optimum assignment of routine labour-intensive jobs (World Bank, 2019).

Globalisation has also influenced the growth of the brain drain discussed earlier. Economic disparities between countries mainly between developing to developed countries has influenced the movement of educated and skilled employees to developed economies. For example, the importation of nurses and teachers from South Africa by Britain is regarded as a way of dealing with a crisis of recruitment (McGrath 2006). Such brain drain can be regarded as having adverse effects on the country being poached in terms of skills shortage (Iravani, 2011). Nonetheless, there is a possibility of the countries supplying the labour gaining from such brain drain. For instance, when these expatriates return home, they do bring with them the knowledge and skills gained from abroad. However, this is dependent on favourable government policy and mechanisms which encourage reinvestment at home.

Rama (2003) argues that globalisation is affecting developing countries, mainly through the labour market. According to Rama (2003), globalisation has affected employment and labour earnings through increased competition in services, import penetration, foreign direct investment and exchange rate variations caused by international capital movements. The macro-economic fluctuations brought by increased global capital movements increase job insecurity, which forces many to leave their jobs, particularly to stable environments (Baily, Farrell, Greenberg, Henrich, Jolles & Remes, 2005). Also, it may force the remaining workforce to enhance their skills sets to adapt to these changes. Increased competition in services and import penetration may also require local organisations to reengineer their work processes. As such, this would require employers to develop their employees to acquire the new required skills.

Globalisation has affected Zimbabwe in many ways. The country has seen many of its skilled professionals moving to neighbouring countries and abroad. This is mainly due to the opening up of borders by most developed countries and the recognition of the skills possessed by Zimbabwe by these countries (Chimbodza, 2012). Zimbabwe lost many skilled professionals such as engineers, nurses, doctors and teachers to nations like the UK, Australia, RSA and New Zealand. Chimbodza (2012) alluded to the fact that in a period of ten years the country had lost 70 to 90 per cent of its graduates with social work losing about 1500 of its 3000 graduates during that period. This migration by the skilled professionals left a gap that is difficult to fill as many of the skilled employees qualifying today are also leaving the country. The main

reason for this departure is the unstable economic and political conditions characterising the country for more than two decades now.

Zimbabwe has seen a collapse of its manufacturing sector due to the influx of cheaper products from other countries (Ngoma, 2020). The deteriorating economy also made it difficult for many businesses to reengineer to meet the increased competition from abroad. This caused many organisations to close shop, forcing many of its skilled workforces to look for employment elsewhere (Crush, 2010). Also, the country has seen foreign direct investment from businesses originating from countries such as China and Russia (Gochero & Boopen, 2020). These businesses bring with them business models from their countries which may also mean retraining of employees in the country to meet the new models. Thus, to mitigate the effects of globalisation on skills availability and development in Zimbabwe has to review its policies and put in place measures that promote skills retention and development.

3.3.6.3 Technological change

Technological changes have impacted on the nature of work. Many disciplines like medicine, manufacturing, agriculture and education are all experiencing changes in the way their practices are being implemented (Sima, Gheorge, Subic & Nancu, 2020). The advent of computerisation has generated opportunities for various industries at the same time it has caused losses in those same industries. The arrival of technology has seen more organisations becoming digitalised, and specific skills have become obsolete (Sima *et al.*, 2020). It is argued that while technological advancement is likely to displace employees, new jobs will be created, and new skills will be required (Raa, Shresthaa, Khatiwadab, Yoone and Kwonc, 2019). As such, continuous employee development should be an essential characteristic of many countries.

Nour (2011) contends that skills development is an essential condition for the fulfilment of economic stabilisation, reduction of unemployment, restructuring of the labour market and technological development. This means that skills development should be a continuous process for employees and organisations. Llorens, Salanova & Grau (2014) explain that ongoing employee development can be understood as a way of constantly and actively learning that is directly linked to people's work and which improves their abilities, attitudes, knowledge, skills and behaviour. The objective of continuous learning will be to expand the professional capabilities of the employees and their knowledge related to the job they perform or are going to perform in the future. Therefore, the responsibility for continuous development does not lie

with the organisation alone. Employees can also find ways of improving their own skills and abilities to be competitive in the labour market (Llorens & Grab, 2000).

The constant changes in technology also require organisations and training institutions to change the way they train learners. Due to how fast-paced technological advancement is, there is a need for organisations to adopt new and more efficient methods of developing employees. Organisations need to embrace technology in delivering learning. For instance, encouraging online platforms for learning helps learners always to be in touch with learning material and equipment from other countries, particularly the developed world. This should ensure that the skills and knowledge they acquire is up to date with changes in technology.

Furthermore, technological advancement also improves the performance of an organisation. Mudford (2000) highlights that technological advancement usually affects the organisation's performance in a positive way. Dauda (2009) contends that for the improved performance to happen, appropriate resources have to be used efficiently and effectively. The appropriate use of technology helps employees become more efficient in their work performance, thus also improving organisational performance. Nonetheless, for the improvement in performance to occur, there is a need to link the technological changes with the required new knowledge and human capabilities (Lekchiri, 2015). This, in turn, should enable the organisation to reap the benefits of investing in such new technology.

3.3.6.4 Ageing workforce

An ageing workforce is another factor influencing skills development in most countries. It is evident that in most developed countries, the workforce is steadily ageing (Chartered Institute of Personnel Development (CIPD), 2015). For example, many developed countries such as the UK, Germany, and USA reported deficits in critical skills such as engineers and healthcare workers with the deficit set to increase over the years. Strack *et al.*, (2008) state that by (2008) Germany required approximately 48 000 engineers with the figure is expected to increase due to an ageing workforce. Similarly, in the USA, in 2016, 18.6 per cent of people working were near or over 65 years old, and the percentage was estimated to increase with an average of 0.6 per cent per year until 2026. Also, Japan had, 25 per cent of its population aged above 65 years old in 2014, and this total was projected to rise to 40 per cent by 2060 (*The Economist* 2017; Collins & Casey, 2017; Debroux 2016). Ndunaka (2018) contends that the severe shortage of skilled employees in most developed countries, particularly in Europe, is being caused by the retiring of most of the Post-World War II baby boom generation. Similarly, Chartered Institute

of Peronnel Development (CIPD), (2015) highlights that the deficiency in skilled employees in several developed countries is exacerbated by the greying of baby boomers and declining birth rates.

Ageing of skilled professional is a serious threat to production in some industries. In the oil industry, nearly half of the skilled oilfield employees will be nearing their retirement age by 2022 (ILO, 2012). A survey was conducted by the Energy Institute in 2008 involving 300 oil and gas organisations in the United Kingdom. The results of the study found that 45 years of age was the median age of those involved in exploration and production while 15 per cent were junior staff in their early twenties (Energy Institute, 2008). This is supported by Manpower (2013) who reiterates that projections in the oil and gas industry show an ageing workforce of petroleum engineers, process experts, geoscientists and low supply of engineers (Oil Review Africa, 2014; Bloom & Sousa-Poza, 2013). These figures suggest a skills deficit within the industry in the near future if these skilled professionals are not replaced.

The retiring of the ageing workforce indicates a deficiency in terms of skilled employees. Gonzalez & Morer (2016) argue that the performance manufacturing sector is affected by the age of employees who work within it. The functional characteristics of the employees within the manufacturing environment are generally related to their ability to perform specific tasks requiring cognitive or physical effort which diminish with age (Strasser, 2018; Gonzalez & Morer, 2016). This reduction can have negative ramifications for the production levels of the sector. The changes in the human resource markets caused by demographic characteristics such as age require industry researchers and policymakers to come up with robust ways of dealing with the challenges. Researchers argue that it is essential to tackle these issues particularly in organisations where employees are called to perform both cognitive and physical tasks such as in the manufacturing and assembly environments (Börsch-Supan & Weiss, 2016 & Battini Calzavara & Sgarbossa, 2017). One way of working through this challenge is through reengineering of organisations to accommodate the ageing workforce. Srilakshmi & Kulkarni (2018) argue that organisations can compensate for the lack of energy by an ageing workforce during physical tasks with higher knowledge and skills in performing new occupations. In support, Abubakar & Wang (2019), argue that experience is a critical factor that impacts positively on individual employee performance in comparison to age and general cognitive abilities. As such management in organisations should find ways of accommodating such ageing population.

Unlike most developed countries where the population is ageing, Zimbabwe's major problem is how to keep the skilled population and assist with economic development. The majority of the skilled employees are leaving the country only to leave behind those who are young and less experienced. Furthermore, it is difficult for organisations in the country to reengineer their workplaces to accommodate the ageing workforces as the organisations are struggling to survive the unpleasant economic conditions.

3.3.7 Reasons for employee skills development

Skills development is important for organisations seeking to achieve competitive advantage. Elnaga & Imran, (2013) state that the effects of skills development are profound in an organisation. Not only does the organisation benefit by making the best use of its human resources to attain competitive edge it also improves the competences and capabilities of its employees. The benefits of skills development, therefore, accrue to both the organisation and the individual and these are discussed below.

3.3.7.1 Employee satisfaction

Skills development benefits individuals in many ways. One of the most important benefits of skills development to an individual is that it leads to satisfaction in employees. When organisations invest in skills development their employees increase their skill sets and ultimately their performance on the job. Elnaga & Imran, (2013) argue that employees are more satisfied when they possess the necessary capabilities required for them to do their jobs. However, this is attained through employee developmental opportunities. When employees obtain developmental opportunities, they feel valued by the organisation which in turn increases their satisfaction thus impacting positively on other work-related outcomes such as increased performance and higher retention. Nzeru (2014) believes that satisfied employees are more productive and usually display higher performance and retention than those who are not satisfied with their jobs.

Okereke & Nnenna (2011) highlighted that skills development enhances an employee's satisfaction by increasing clarity on how job activities could be done. When employees perform their jobs with clarity it leads to efficiency in performance. The argument being that skills development enables employees to conduct their tasks efficiently thus preparing them to take advanced positions in organisations. Thus, further enhancing their self-respect and feelings of being more economically independent which makes them feel more secure and satisfied with their jobs.

In addition, skills development increase employee satisfaction by reducing frustrations and anxiety emanating from their jobs. Elnaga and Imran (2013) argue that employees who feel they are unable to perform their jobs up to expected standards often leave their jobs and if they do stay their contribution to the organisation's bottom line is minimal. Elnaga & Imran (2013) further contend that the greater the gap between the skills needed to perform the job and the skills employees have the higher the job dissatisfaction found in the employees. Employees with the required skill sets are more able to meet the required standards determined by the organisation which maintains and increases their satisfaction with the job. Thus, not only does equipping employees with the necessary skills translate to superior performance it also reduces frustrations and anxiety coming from poor performance thereby maintaining an employee's jobs satisfaction levels.

3.3.7.2 Employability

Skills development is essential for enhancing the employability of employees (Brewer, 2013). Crawford, (2013) claims that tertiary institutions are becoming increasingly concerned about advancing employability skills of their graduates and developing relations with businesses. This goes a long way in developing a knowledge economy which is essential for global competitiveness through superior goods and services. As such, developing employability skills of employees is important to organisations. According to International Labour Organisation (2005) employability refers to:

".. the skills, knowledge and competencies that enhance a worker's ability to secure and retain a job, progress at work and cope with change, secure another job if he/she so wishes or has been laid off and enter more easily into the labour market at different periods of the life cycle. Individuals are most employable when they have broad-based education and training, basic and portable high-level skills, including teamwork, problem-solving, information and communications technology (ICT) and communication and language skills. This combination of skills enables them to adapt to changes in the world of work".

Brewer (2013) highlights that employability results from many factors. These factors include availability and access to education and training opportunities, ability to make use of continuous learning opportunities, appreciation of acquired skills and motivation. These factors are essential in that they enable employees to obtain decent work and adapt to change such as enabling organisations to take up new technologies and to enter new markets. Hedges (2011)

argues that developing employability skills is important in professional development and advancement. Having employability skills assist newly graduates and existing employees to acquire knowledge and skills required by their job responsibilities, job professions and work environment. Employees therefore receive higher knowledge and skills from training and development programmes which also influence their career growth and advancement opportunities.

Laker & Powell, (2012) state that when employee skills and competencies are developed especially through employability skills training programmes there is greater sharing and transfer of skills amongst employees. They argue that by implementing such skills development initiatives capabilities can be transferred between employees, employers and industry experts which results in competent employees. Equally, Leong (2011) argues that successful transfer of work-related skills and knowledge results in the development of competent employees. Also, Mustapha & Rahmat (2013) claim that successful transfer of capabilities enhance employee's chances to be competitive in the challenging market. Groot & Brink (2010) further remark that skills development makes employees more employable within the organisation. They argued that skills development enhances internal flexibility. If skills development takes the form of multi-skilling employees will be able to perform multiple activities. Employees in such cases can be employed in more jobs and they require less supervision in doing their work. In this regard, supervisors will have more time to do other things and the organisation will also save resources and channel them to where they can be more useful.

3.3.7.3 Employee performance

According to Akilandeswari, (2014) employees who are knowledgeable, skilled and productive are the most valuable assets in organisations in the 21st century. Employee's skills development impacts positively on employee's performance. The important effect of skills development on the performance of employees is that it improves the quantity and quality of production in an organisation. It increases profitability and maintains the organisation's strength by dropping expenses and costs, reducing risk and increasing the organisation's establishment in the market (Shaheen, Naqvi, & Khan, 2013). Likewise, Sherwani & Mohammed (2015) remark that the success of every organisation is based on the performance of their employees. They argued that the employee is the most important factor in the organisation and employee performance is directly linked to the efficiency of an organisation. Ahmed & Shahzad, (2011) highlight that increased employee performance results in better outcomes for the organisation such as increased quality of production and employee commitment. Also, Nassazi (2013) argues that

skills development is important in enhancing employee performance and in subsequently increasing productivity. This in turn results in organisations staying ahead of their competitors. Nassazi (2013) further argues that this consequently suggests that a major difference exists between organisations that develop their employees than those that do not. Employee development generates improved performances in employees by impacting on their performance positively through increased skills, knowledge, competencies, ability and behaviour (Appiah, 2010).

Skills development in employees enables them to develop required competences to perform their work. Nawaz, Masoodul, & Saad, (2014) state that through development initiatives employees acquire a range of skills such as interpersonal, technical and solid knowledge required for them to perform work efficiently. As such, lack on continuous development programmes results in reduced performance of employees. For organisations to maximise on the performance of their employees, significant investments in them have to be made by the organisation. Dikshit & Jain (2017) argue that for organisations aiming to succeed through employee performance, an effort must be made to improve the skills of these employees for them to achieve their stipulated goals. Management in organisations should, therefore, not be hesitant in investing in their employees if the benefits outplay the investment.

A plethora of studies have been performed to ascertain the connection between skills development and performance in employees. For instance, in their study on the influence of training and development on employee performance in small to medium enterprises in Malaysia, Bin Atan, Raghavan, & Mahmood (2015) found a significant relationship between training and development and employee job performance. Also, Falola Osibanjo, & Ojo, (2014) in a research on the effectiveness of employee skills development on organisational competitiveness in the banking sector in Nigeria found a significant relationship between employee skills development and performance. The results showed positive mean scores for skills development with employee performance: induction and orientation (Mean = 4.2197); mentoring (Mean = 4.1166); coaching (Mean of = 3.9148); and apprentice and job rotation (Mean = 4.1883, 3.9686). Their study used descriptive statistics on two hundred and twenty-three valid questionnaires obtained from selected banks in Lagos Nigeria. Similarly, Amin, Saeed, & Lodhi (2013) in a study focusing on skills development and employee performance on the job in the education sector in Pakistan discovered that when employees' skills are developed their commitment and knowledge levels increases which positively influences their job performance.

3.3.7.4 Employee productivity

According to Khawaja & Nadeem (2013) organisations should finance continuous upskilling to retain employees and to promote the organisation. Employee skills development is invaluable in enhancing productivity of organisations. Nda & Yazdani Fard (2013) argue that skills development provides employees with opportunities to perform their jobs more proficiently thus adding to not only their individual output but the organisation's productivity as well. Employee development in due course enhances not only the output of employees but that of the organisation as well. Thus, skills development is an invaluable factor in enhancing sustainability through productivity in organisations.

Employee development is regarded as one of the pervasive ways of communicating organisational goals and of enhancing employee productivity. Rohan & Madhumita (2012) augmented this view by stating that investing in employee skills enhances problem-solving, teamwork, interpersonal relations and decision-making, which have valuable effects on the organisations' productivity and level of growth. Nda & Yazdani Fard (2013) add that it is imperative for organisations to continue investing in skills development programmes as most successful organisations attribute their successes to the role played by employees in production. They further note that the optimum objective of every organisation is to achieve maximum profit through high revenue obtained from effective and efficient employees. As such employees are more efficient and effective if they receive suitable training and development thus impacting positively on productivity.

Nda & Yazdani Fard (2013) further contend that employee skills development must be crafted and delivered in a way that addresses the desires of the employees such that not only will they be productive but satisfied as well. Employee development influences employees to do their jobs more effectually, increasing their technical and interpersonal abilities, job confidence and work motivation (Zhang & Shao, 2009). In this regard, employee development helps in unlocking the probable growth and developmental prospects in employees to realise competitive advantage (Rama & Shaik, 2012). Organisations should therefore train and develop the skills of their employees to attain enhanced productivity from them. Organisations should invest continuously in knowledge and skills which are critical determinants in employee's performance and subsequently their output.

3.3.7.5 Employee innovation

Employee skills development results in employee innovation. The assumption is that when employees are developed and receive the necessary skills, knowledge and competences pertaining to their work they will be able to innovate or display innovative behaviour. Elnaga (2013) believes that employee training and development enhances creativity and innovativeness. Employee skills development shapes the organisation with sustainable skills and knowledge required for uniqueness and differentiation from its competitors. In the same vein, Hartog (2010) states that when employee skills are developed it promotes employee innovativeness, making it easier for the organisation to introduce change, encourage the generation of innovative behaviour and actively involve employees in problem-solving, idea generation and idea commercialisation which is imperative for competitive advantage.

Employee innovativeness is influenced by levels of knowledge, skills and competences that their employees possess. To survive the ever-changing market conditions, organisations need to invest heavily in developing the skills of their employees so as to encourage innovativeness. Dysvik, (2007) argues that not only does skills development enhance the value of an employee's knowledge it is also a channel for helping employees to undertake certain functions and tasks which helps the organisation to undergo transformation. There is pressure for organisations to develop the skills of their employees simply to cope with the changes in the market such as technological advancement and increased demand for superior quality standards (Khambule, 2013). Such standards can be met when employees are creative and innovative. For employees to take part in innovative behaviour organisations should, therefore, provide a workplace environment that encourages learning and the development of employees (Gustavsson, 2012).

According to Bauernschuster, Oliver & Heblich (2009) employee innovation is an important driver of economic growth and development. However, employees are the key underlying determinants of the innovation process. When employee have their skills, knowledge and competencies developed they contribute significantly to economic growth and development through innovation. Also, Bauernschuster, *et al.*, (2009) argue that innovation is the only channel to keep up with the competitive environment especially on the technological front. As such, employee skills development increases the organisation's chances of coming up with different innovations. Skills development in employee's results in them having leading edge

knowledge and better understanding of complex products and production processes hence they are more likely to innovate and come up with technological improvements.

Furthermore, employees become more innovative when they are given more opportunities to upgrade their knowledge and skills base. Wang (2013) contends that when employees receive training they are motivated to innovate. Training stimulates idea generation in employees which is positively related to organisational process and product innovation activities (Neirotti & Paolucci, 2013; Sung & Choi, 2014). In addition, employee development exposes employees to a plethora of ideas used as solutions to problems requiring innovative solutions (Fernandez & Pitts, 2011). Also, while skills development in employees is suggested to make employees generate improved ideas for problem-solving it also enhances employee skills in appraising ideas thus skills development also improves the capacity to adopt better ideas in employees (Basadur, 2004).

Michaelis & Markham, (2017) also contend that training and skills development provides opportunities for organisations to develop an innovation-oriented culture and employees who have innovation skills and a better comprehension of the organisation's support for innovation. For that reason, organisations should put in place initiatives that enhance skills and competences for innovation. According to Michaelis & Markham, (2017) such competences include technological knowledge, project management skills, product design skills, portfolio management, strong market research skills, and an appreciation of the customer's voice through the product. Michaelis & Markham, (2017) further argued that for organisations to be successful in cultivating innovation in their employees there has to be an investment in the development of cross-functional teams with a strong appreciation of innovation. As such, organisations with a strong appreciation of skills development will benefit from sustained competitive advantage as employee's innovation is considered a critical force in achieving business excellence.

Studies have been conducted to confirm the relationship between skills development and employee innovation (Abdullah, Ping, Wahab, & Shamsuddin, 2014; Bauernschuster *et al.*, 2009; González, Miles-Touya, & Pazo, 2016). Although not many, the studies have established a positive relationship between skills development and employee innovation. For instance, Abdullah, Ping, Wahab, & Shamsuddin (2014) in their study on small to medium enterprises the results proved that employee skills development is an important predictor of employee innovation. Also, in their study they found employee skills development to be a

significant predictor of employee innovation dimensions like idea generation, idea exploration, idea implementation and idea promotion.

Bauernschuster *et al.*, (2009) discovered a positive relationship between organisational sponsored employee development and employee innovation. Their study in Germany displayed a statistically significant relationship between the two constructs. In their study a 10 per cent increase in training and development intensity resulted in a 10 per cent increase in propensity to innovate. Also, in another study on the impact of skills development on routine and radical innovation, Bauernschuster *et al.*, (2009) found a positive association between the constructs. Their research hypothesised that radical innovation is more challenging to achieve as it depended on intrinsic motivation of employees such as inventive talent and creativity. Furthermore, the research hypothesised that with radical innovation assumed to be overly risky, organisations might support training and development just for routine innovation to keep up with technological changes in the market.

3.4 Chapter Summary

This chapter discussed literature on the concept of skills development. First, the chapter discussed the meaning of skills development before moving on to the global view of skills development. Under the global view various skills development systems from different countries were discussed. These countries included Singapore, India and Denmark. The chapter then focused on the skills development system in Zimbabwe where themes such as general education, TVET, internships and graduate trainee programmes were discussed. Also, discussed in the chapter are government initiatives to promote skills development. The chapter further looked at the factors influencing skills development and the benefits of skills development. On the benefits of skills development, also incorporated is a discussion on the link between skills development and employee innovation which is part of the objectives of this study. The following chapter reviews literature on the concept of employee innovation.

CHAPTER FOUR

A REVIEW OF LITERATURE ON THE CONCEPT OF EMPLOYEE INNOVATION

4.1 Chapter Introduction

The chapter before focused on literature review on skills development. The chapter discussed the meaning of skills development and the global view. This chapter reviews literature on the variable employee innovation. The chapter presents and discusses viewpoints on the significance of the variable. The chapter commences with a discussion of the meaning of employee innovation before focusing on factors that promote it. A discussion of the consequences of employee innovation will then ensue, which is followed by a chapter summary highlighting some of the elements discussed in the chapter.

4.2 Understanding the concept employee innovation

The advent of advanced technology and the ever-increasing dynamic business environment has brought competitive pressures to bear between organisations. To gain competitive advantage through novel processes and products, organisations have to rely on the innovativeness of their employees. The concept of employee innovation has received its fair share of attention in business management research with several authors providing their understanding of the concept. As early as 1990, authors had made attempts to define the concept. For instance, West Farr, (1990) explained that employee innovation involves the purposeful development, promotion and application of new and valuable ideas intended to benefit organisations through increased individual and group role performance. It is an act of implementing innovative thinking in organisations which allows employees to use innovative methods quickly and precisely to respond to the ever-changing customer demands (Woodman, Sawyer, Griffin, 1993; Scott & Bruce, 1994; Robert, 2001). This explanation suggests that innovation is a critical component necessary for organisational effectiveness in the increasingly changing and uncertain business environment.

West (2002) highlights that employee innovation involves in-role and extra-role work behaviour by individuals because it includes both prescribed work activities and those beyond defined formal roles. This explanation of employee innovation proposes that apart from employees exhibiting innovative behaviour during formal work processes, they would also go an extra mile outside their prescribed roles to think of and implement innovative ways to improve organisational performance. The definition by West (2002) would also mean that employee innovation is found within the context of organisational citizenship behaviour. Hai

& Tziner (2012) state that organisational citizenship behaviour is discretionary behaviour exhibited by individuals. The behaviour is indirectly recognised by the formal channels of an organisation but upholds the efficient operation of the organisation. Singh (2007) asserts that the term discretionary highlighted in the explanation of organisational citizenship behaviour denotes that the behaviour is not a compulsory obligation in the job description. Still, it is somewhat a matter of choice under which its omission is regarded as not punishable in the organisation.

Kesting & Parm Ulhøi (2010:66) describe employee innovation as “the generation and execution of essential new ideas, products, and processes emanating solely from an employee or through collective efforts of two or more employees not assigned to the original task.” This description of employee innovation is distinguishable in that its emphasis is on application, innovation and significant newness as non-obligatory activities. Lockwood (2017) reasons that the description of employee innovation by Kesting & Parm Ulhøi (2010) is based on the notion that all employees are capable of being innovative and that organisations need to tap into this innovation to become more competitive.

Gapalakrishnan, Kessler & Scilliotte (2010) provided another perspective and explained that employees are the basis of innovation because they feed into the innovation process that is from the idea generation stage to the implementation of changes within the organisation. Banniewies & Gromer (2012) added another angle of employee innovation and asserted that it is made up of three essential components, which are idea generation, promotion and implementation. Idea generation involves coming up with new practical ideas; promotion involves the selling of the idea generated; and implementation focusing on the actual execution of the concept (Banniewies & Gromer 2012).

Brandi & Hasse (2012) provided another conceptualisation of employee innovation. They argued that employee innovation could be understood in three different forms, which are the research and development (R&D) approach, the bottom-up approach and corporate entrepreneurship. The R&D approach views employees in R&D departments as innovators with those not found in these departments are generally not expected to innovate. From a corporate entrepreneurship perspective, organisations expect employee innovation to be part of every employees' daily work as innovation is seen as shared intellectual capital imperative for an organisation's growth and competitive advantage. In the bottom-up approach, employees are seen as always innovating. In this approach, employees generate ideas to improve their

work processes based on their working experience and the subculture within the organisation. Expanding on the bottom-up approach, Brandi & Hasse (2012) differentiate between creativity and innovation. They argued that creativity results from the ideas and actions of individuals arising from their daily learning and practice-based work life. At the same time, innovation involves organisations recognising and adopting creative actions and ideas from the employees. This view concurs with Amabile & Pratt's (2016) who believe that ideas must be implemented first to regard them as innovation. Also, Brandi & Hasse (2012) assert that what is regarded as innovative should also be generally accepted within the subcultures of an organisation represented by relational interactions in an organisation.

The above explanations of employee innovation share a significant commonality. All the explanations above point to the generation of an idea and the successful implementation of the concept. In this regard, this study, therefore, describes employee innovation as the successful acceptance and execution of employee-generated ideas by a business entity.

4.3 Factors influencing employee innovation

This section of the literature review focuses on factors that influence employee innovation. These factors include communication, reward system, organisational communication, supportive environment, leadership, employee voice, supportive learning culture and personal initiative.

4.3.1 Communication

Communication plays a critical role in enhancing employee innovation. Existing literature on communication and employee innovation suggests that employee innovation is a result of a social networking process focusing on innovation (Madjar, Oldham & Pratt, 2002; Amabile, 1983; Axtell *et al.*, 2000). Communication is regarded as necessary in information and idea-sharing within the employee innovation context (Hemphälä & Magnusson, 2012). It is argued that the diversity within teams infers more significant employee innovation due to variances in experience, information and knowledge between members of a group (Harrison & Klein, 2007). Similarly, Perry-Smith & Shalley (2003) suggest that employees with diverse contacts whether inside or outside the organisation are expected to enhance their innovation-related skills because of their diverse networks as they are exposed to non-redundant information which increases their capacity to champion and implement ideas.

Free and open communication within the organisation encourages information and opinion-sharing. Hülshager *et al.*, (2009) claim that when open communication exists, it enables

information-sharing and idea exchange which are essential ideas in innovation. Researchers argue that employee innovation is positively influenced by communication openness (Damanpour, 1991; Ahmed, 1998; Martins & Terblanche, 2003). These researchers concur that innovative endeavours by employees are promoted when organisations provide channels of open communication and space for the employees to deliberate on their ideas. In other words, organisations that seek employee innovation should provide a conducive climate for innovation to thrive in their employees where they can share and discuss new ideas, some of which are also adopted by the organisation.

Stull (2004) adds that when employees are encouraged to raise their voices and ideas to management, they will find it easy to initiate innovative actions. Morrison (2011) argues that employee voice improves decision-making and learning within an organisation. Aguinis *et al.*, (2016) state that when employee voice is not encouraged in an organisation, employees are fearful of sharing their ideas and this should be of great concern to the leaders because it does not promote a conducive environment for innovative thinking. Thus, encouraging employee voice is essential in employee innovation since new ideas can be shared freely as better and effective decisions can be made in organisations.

Wang (2013) highlights that both internal and external communication are imperative for the innovation process. Wang (2013) reiterates that employees must be around their colleagues for them to be innovative. This is because employees encourage and stimulate one another to be passionate about their work. Muñoz-Doyague & Nieto (2012) claim that employees who have exposure to different perspectives and approaches can enable innovative abilities due to increased access to information and knowledge relevant to the innovation process. Perry-Smith & Shalley (2003) also argue that frequent interface between colleagues makes for less innovation by comparison with less frequent interface. The reasoning behind their argument was that while frequent interactions occur between individuals who are alike, less frequent relations are more likely to occur among individuals with varying opinions, interests and a wider range of ideas for solving problems.

Research has also shown the importance of internal communication between employees in organisations. For instance, Van de Ven (1986) cited in Wang (2013) found that effective internal communication between employees permits the sharing of past experiences, knowledge, information and discussion of ideas, which is substantial in the generation and implementation of new ideas. Also, Monge, Cozzens & Contractor (1992) found that group

communication results in the generation and performance of innovative ideas. Thus, innovation is influenced by views from others.

Just like internal communication, external communication also influences employee innovation. De Jong & Den Hartog (2010), reason that frequent contact between people outside the organisation is a pertinent source of inspiration, knowledge and information necessary for employee innovation. Studies have also shown how external communication networks influence employee innovation. For example, Hemlin & Olsson (2011) found that external communication stimulates innovative actions. Similarly, De Jong & Den Hartog (2010) revealed that frequent communication with external contacts influence innovative behaviour as external references bring better knowledge and new ideas to the organisation. Findings from the above research studies suggest that organisations must maintain communication networks with their varying stakeholders as they can be a source of new ideas. For instance, customer complaints and suggestions can be used as sources of new ideas to improve products and services offered by an organisation.

4.3.2 Reward system

An organisation's reward system is critical in influencing the innovative behaviour of employees. The assumption is that when organisations provide a conducive work environment where employees feel motivated, employees will increase their work processes, including their innovative behaviour. This is shared by De Clercq, Thongpapanl & Dimov (2015) who argue that rewards motivate employees by developing a sense of excitement in them which results in the development of an innovative culture. Jiang, Wang & Zhao (2012) state that when organisations value their employees by providing them with incentives, employees in exchange reciprocate through providing more effort, willingness to make suggestions and to experiment with new techniques of performing their work. In other words, the incentives motivate the employees to innovate with their jobs.

Rewards impact on employee innovation differently. The nature and type of rewards influence the innovative behaviour of employees differently. Darmaki, Omar & Ismail (2019) argue that innovation differs in degree and kind as such different kinds of rewards influence different kinds of innovation. For instance, extrinsic rewards such as monetary benefits and intrinsic rewards impact employee innovation differently even though these two types of rewards are usually used interchangeably (Buljubasic, 2013).

The size of the reward is another factor critical in using rewards to influence innovation in organisations. Darmaki *et al.*, (2019) argue that employee innovation is usually a team-based effort. In that regard, offering individuals substantive rewards, especially financial incentives, may set them up against each other. Organisations, therefore, must be careful not to initiate unhealthy competition among employees such as fighting for resources. Rahim, Nasir, Azrim, Yusof & Ahmad (2013) argue that for organisations to realise healthy employee innovation they should take note of those contributing positively to the required outcomes must be rewarded in the long-run. Mahdawi (2016) contends that rewarding employees motivates them to be more innovative as rewards increase their satisfaction which results in increased innovative performance. Thus, to maintain fairness in organisations, rewarding employee innovation should be structured along with employee performance (Kremer, Villamor & Aguinis, 2019). If innovation is a team effort, the organisation needs to reward the whole team rather than rewarding individuals. If rewards are only offered to an individual instead of the entire group, this may cause disgruntlement among team members which may stifle their innovative performance in the long-run (Kremer *et al.*, 2019).

Perceived fairness in rewards also influences employee innovation. Fischer & Smith (2003) believe that organisations that reward employees fairly and equitably benefit fully from the outcomes of the rewards. Appelbaum *et al.*, (2011) highlight that effective and fair reward systems enhance employee morale as they are a sign of equitable treatment of employees, and this, in turn, fosters innovation in employees. Zhou & Shalley (2003) state that the existence of fair reward systems in organisations prompts employees to think that their organisation encourages innovation as a norm, and that they too are required to participate in innovative behaviour. Similarly, Baumann (2011) maintains that organisations must present rewards consistently, fairly and equitably to obtain meaningful participation and involvement from employees. As such, innovation in employees is a function of perceived fairness and consistency. If employees assume their rewards to be unfair, their participation and involvement in innovative behaviour may be affected, which is not favourable to the achievement of competitive advantage in organisations.

4.3.3 Organisational Commitment

The changing global economic environment and increasing competing demands have made employee innovation in organisations significant. Employee innovation is essential for organisations aiming to achieve a competitive advantage over others (Nguyen, Siengthai, Swierczek & Bamel, 2019). To enhance employee innovation, organisations need to have

committed and motivated employees who engage in innovative work behaviour (Afsar & Badi, 2014). Committed employees are more innovative and satisfy customer needs (Hakimian Farid, Ismail & Nair, 2016). Employee commitment thus plays a critical role in determining the innovative capacity of the organisation. Nobarieidishe, Chamanifard & Nikpour (2014) remark that employee commitment is the extent to which an employee connects with and is involved in the organisation's activities. It is an attachment employee's make with particular work activities or situations (Irefin & Mechanic, 2014).

Organisational commitment is a multi-faceted construct with three distinctive components, namely affective, continuance commitment and normative. Affective commitment refers to an employee's emotional attachment to the organisation. Continuance commitment involves recognition by an individual that there are costs involved when one separates from the organisation. While normative commitment refers to a sense of obligation to remain with the organisation. (Odoardi, Battistelli, Montani & Peiro, 2019). Studies have shown that it is affective commitment that is inclined towards employee and organisationally relevant outcomes such as in-role and extra-role behaviour (Meyer & Herscovitch 2001; Battistelli, Gatella, Portoghese & Vandenberghe, 2013). As such, a link exists between affective commitment and employee innovation.

Researchers have established that there is a connection between commitment and employee innovation (Hannele & Marjo-Riitta, 2017; Scott & Bruce, 1994). They argued that a link exists between organisational commitment and employee innovation, with employee innovation needing extra-role behaviour from employees. This argument is shared by Thamrin (2012), who highlights that organisational commitment has a notable effect on employee innovation. Meyer, Stanley, Herscovitch & Topolnytsky (2002) contend that the more employees are committed, the higher the employee innovation. The association between commitment and employee innovation can be explained using the SET. The assumption is that when organisations invest in their employees they become committed to their jobs. Employees, in turn, reciprocate by being innovative in their work. Xerri & Brunetto (2013) applying the SET, argued that staff who are committed are highly likely to be innovative.

Similarly, Silverman (2017) states that employees who have adequate opportunities are committed and they have the impetus to innovate. Hence, for organisations to obtain positive work outcomes from employees, they need to provide them with a variety of resources and the employees, in turn, should develop a personal commitment to the organisation depending on

what they receive from the organisation. Auger & Woodman (2016) note that affectively committed employees have positive emotions and high levels of intrinsic motivation which are vital for enhancing creativity in individuals. Alongside this, Batistelli *et al.*, (2013) state that affective commitment activates inherent motivation in employees which expands their access to innovative ideas and solutions by increasing their cognitive flexibility and openness to complexity.

Considerable research has been undertaken to establish the relationship between commitment and employee innovation. Specifically, affective commitment has been shown to influence employee innovation. Powell & Le (2016) in their research on a large technology organisation in Vietnam found affective commitment as a significant predictor of employee innovation. Vinarski-Peretz & Carmeli (2011) discovered that affective commitment mediated the positive impact of subjective relational experiences on employee's involvement in innovative activities. Also, Ordaz, Cruz, Ginel & Cabrera (2011) found affective commitment to indirectly influence the innovative performance of research and development employees through influencing their knowledge-sharing behaviour.

Researchers have also highlighted potentially unfavourable consequences of organisational commitment that may hamper innovativeness in employees. It is argued that committed employees display deep apprehension for the welfare of others which supersedes their personal concerns. Such employees might find it challenging to suggest new ways of doing things that break routines, and that might be stressful for others as a consequence (Tornau & Frese, 2013). Also, committed employees often feel disturbed by the threatening effects of job-related problems. This obstructs their ability to address effectually the potential taxing demands related to innovation application. For example, unforeseen errors or problems that may decrease the chances of putting innovative ideas into practice efficiently.

4.3.4 Supportive work environment

Previous studies have highlighted that the work environment is an essential antecedent of employee innovation (Perry-Smith & Shalley, 2003; Parker, Williams & Turner, 2006; Yuan & Woodman, 2010). The studies supported the notion that perceptions of supportive and encouraging working environments increase the innovative reactions of employees and the uptake of those reactions by the organisation. Prieto & Perez-Santna (2014) state that employees display positive affective reactions such as affective commitment and job satisfaction when their co-workers and supervisors treat them in a more supportive manner.

The absence of which may result in feelings of frustration towards the organisation. Madjar (2005) argues that when individuals are provided with support from their co-workers and management, their morale is enhanced, resulting in them displaying greater levels of innovative behaviour.

Supervisor support has been regarded as necessary for generating innovative behaviour in employees (Hunter & Cushenbery, 2011). When management is supportive, they encourage their employees through displaying feelings of concern, being non-judgemental, promoting employee voice, and by providing informal feedback. Management support shows a sense of participation and involvement which is essential in generating innovative ideas (Calantone, Cavusgil & Zhao, 2002). Line managers are regarded as significant sources of finding information for innovation as they are viewed as having more knowhow than the focal employee (Madjar, 2005). Srivastava, Bartol & Locke (2006) argue that the bond between a supervisor and subordinate shows a significant facet of the work environment which can stimulate the employee's intent to perform better, by using their initiative for problem-solving and improvement in the quality of their work. Yuan & Woodman (2010) add that considering and using innovative ideas usually need goal clarity, resources, equipment, additional time, and freedom at work. Therefore, management and their employees should have excellent relationships if they are to reap the benefits of employee innovation.

Co-workers support is also essential in stimulating employee innovation. Co-worker support enables collaborative work which is pertinent for knowledge-sharing, and for the creation of new ideas that are significant in employee innovation (Hayton, 2005 & Hsu, Ju, Yen & Chang, 2007). It is argued that when employees put trust in each other, they feel psychologically safe and free to deliberate on issues and problems, thus able to share and integrate pertinent information necessary for innovation (Prieto & Perez-Santna, 2013). The sharing of knowledge and experience by employees results in knowledge exploitation and creation, as the risk of fear is alleviated when employees combine their ideas and information. Also, Prieto & Perez-Santna (2013) state that co-worker support reduces the risk of threat or embarrassment but increases initiative and cooperation, which influences the organisation's performance through learning.

Research on employees in organisations with reliable social support and collaborative networking has shown that employees in such environments are more likely to be innovative (Amabile *et al.*, 1996; Zhou & George, 2001 & Shalley, Zhou & Oldman, 2004). For instance, Amabile *et al.*, (1996) established that highly-innovative project teams recorded higher

measures of ‘workgroup support’ compared to low-innovative teams. Similarly, Zhou & George (2001) found significant positive relationships between measures of co-worker help and support and employee innovative behaviour as information and expertise from co-workers is seen as a way of helping dissatisfied employees and of providing feedback.

As indicated above a supportive work environment plays a critical role in stimulation of innovative behaviour in employees. Management, therefore, has a role to play in stimulating a supportive environment that encourages idea-sharing among employees which is essential for employee innovation.

4.3.5 Leadership

Organisations that seek to remain relevant and competitive have to pay attention and support the frequent generation of innovative ideas and how the ideas can be used to transform the organisation (Zennouche, Zhang & Wang (2014). According to Tyssen, Wald & Spieth, (2014) leaders contribute a significant amount towards supporting innovation by their subordinates. Leaders act as facilitators by availing the conditions necessary for both individuals and team members to use their skills in generating innovative outcomes (Zennouche, 2014). Researchers argue that leaders represent the organisation’s desires to become innovative by managing the allocation of resources in the form of time, setting and supervising individual and group goals, managing rewards, giving autonomy to teams and individuals and managing standards for innovation performance (Hemlin, 2006; Shalley & Gilson 2004; Hülshager, Anderson & Salgadoet, 2009; Yuan & Woodman, 2010).

Employees’ innovative behaviours also depends on the effective stimulation and motivation from the organisation’s leadership (Mumford, Scott, Gaddis & Strange, 2002). Through influential communication, leaders can convey management concepts to their subordinates and thereby influence their behaviour (Wang Yongyue, 2014). In addition, leadership enhances employees’ innovative behaviour through direct support and by helping them set innovative goals (Wang Duanxu *et al.*, 2010). Leaders also influence their subordinates’ innovation capacity by offering to praise and to capture their personal information to show their support and admiration for employees’ innovation.

The leader-member exchange theory emphasises the quality of social exchange relations between followers and leaders. According to Howell & Shamir (2005), the theory focuses on the influence leaders exert on their followers. The theory relationship demonstrates the relational concept of how leadership contributes to employees’ feelings of energy, job

performance and organisational commitment (Garg & Dhar, 2014). The leader-member exchange relationship also provides high interpersonal support between leaders and their followers. It shows how leaders offer appreciation, recognition and autonomy and decision-making to their followers (Hammond, Neff, Farr, Schawall, 2011; Volmer, Spurr & Niessen, 2012). Researchers argue that the quality of the leader-member exchange relationship predicts the likelihood that followers will engage themselves in innovative behaviour (Janssen & Van Yeperen 2004; Moghimi, 2016). The leader-member exchange relationship theory lays the foundation for how different leadership styles influence employee innovation.

Leadership style is professed to be a significant factor that contributes to employee innovation (Correa, Morales & Pozo, 2007). Researchers believe that leaders are vital in enabling innovation because they are responsible for building the conditions necessary for it to flourish (Mumford *et al.*, 2002; Kaiser, Hogan, & Craig, 2008; Shalley & Gilson, 2004). Leadership styles do not influence employee innovation in the same way. Scholars on leadership have argued that leadership styles impact on employees' innovation in organisations differently (Mumford, Connelly & Gaddis, 2002; Jung, Chow & Wu, 2003). Transformational leadership, for example, influences employee innovation more than any other leadership style. Transformational leadership changes subordinates by increasing their self-interest through changing their morale, motives, values, ideals, and motivates them to accomplish better than the set standards (Choi, Kim, Ullah & Kang, 2016).

Transformational leadership encourage followers' self-efficacy through intrinsic motivation, which positively impacts on innovation (Boerner, Eisenbeiss & Greisser, 2007). Intrinsic motivation encourages employees to be relationship-oriented, which enhances their accord on a higher level (Janssen, 2000). As such, employees get united and work together to accomplish the organisation's long-term vision (Judge & Piccolo, 2004). Also, transformational leadership enhances employee intellectual capacity by encouraging them to think outside the box (Cho, Goh, Adam & Tani, 2016). Moreover, transformational leadership stimulates intellectual consciousness and working behaviour, which makes employees dedicate themselves to the work for the prosperity of the organisation. In this regard, transformational leadership enhances employee capabilities, thus also impacting on their problem-solving skills.

Furthermore, transformational leadership promotes an organisational culture where employees are encouraged to develop new ideas, which enhances their innovative behaviour (Dorenbosch, Engen & Verhagen, 2005). Gumusluoglu & Ilsev, (2009) highlight that transformational

leadership nurtures supportive actions of innovative behaviour such as vision, autonomy, challenge, self-efficacy and encouragement. Therefore, to remain, competitive managers, need to cultivate the transformational leadership style, which is significant for encouraging innovation-based organisations.

4.3.6 Employee Voice

Employee voice plays a significant role in influencing employee innovation. Azevedo, Schlosser & McPhee (2020) argue that for organisations to be innovative, they require the full involvement of their employees as they are the source of new ideas which results in practical solutions. Wilkinson & Fay (2011) argue that for employees to participate fully in organisational activities, they should be included in decision-making of the activities and it is the mandate of the human resource function to encourage employee participation in decision-making of activities that concern them. Wilkinson & Fay (2011) further note that encouragement from the human resource function tends to stimulate voice in employees which supports their efficiency and performance.

Bos-Nehles, Renkema & Janssen (2017) state that the perception of innovation as the most vital element for organisational survival in a dynamic environment has been growing. Organisations are, therefore facing the need to change their usual ways by finding new solutions for different problems. In this regard, organisations are encouraging and expecting their employees to participate in and contribute to the innovation process. Wilkinson *et al.*, (2018) argue that for organisations to promote employee innovation, they need to develop structures that encourage and support employee voice. Employee voice provides the platform to share and discuss their innovative ideas through voice behaviour. Programmes such as quality circles, autonomous work teams and joint labour management committees encourage employee voice through expression of their thoughts, suggestions and ideas (Azevedo, Schlosser & McPhee, 2020).

According to Mowbray *et al.*, (2015) the concept of employee voice has shifted focus from the narrow understanding of voice being perceived as an expression of dissatisfaction such as a grievance to being associated with active pro-social behaviour. Employee voice has been expanded to include employee input under which employees develop discretionary communication, encouraged to air their concerns, make suggestions that may challenge the status quo, share information about the problems facing the organisation and participate in making decisions that affect the organisation (Morrison, 2014). Employees use voice to express

their preparedness to become involved in discretionary behaviour such as extra-role behaviour, which is significant in improving the performance and efficiency of the organisation. Wilkinson & Fay (2011) state that active employee voice is substantial for employees to involve themselves in the innovation process when innovation is perceived as an extra-role behaviour. As such, employee voice from all angles in the organisation is essential to the development of significant customer-focused innovation.

4.3.7 Supportive Learning Culture

Another critical factor that influences employee innovation is a supportive learning culture. Employee innovation is something that does take place over time. Organisations have a mandate of putting in place measures that nurture and facilitate continuous learning and development of innovative behaviour by employees. Fuller & Unwin (2011) state that the effective incorporation of employee development activities and daily work duties places considerable demands on the internal context of the organisation, that is, on the workplace as an environment not only for production but also for learning and the development of employees and the organisation. Researchers argued that the work environment develops circumstances for learning arising from work activities such as the task itself, social interactions, managerial support and strategies used to develop competencies (Fuller & Unwin, 2004; Evans *et al.*, 2006; Ellström & Kock, 2008). Therefore, organisations should promote learning so that they are able to reap the benefits of learning organisations when they move away from routine work activities towards new ideas and innovativeness (Ellström, 2010a).

Researchers argue that it is essential for organisations to create conditions necessary for employee innovation if they are targeting it (Gustavsson, 2018). Organisations with working environments that support learning generate innovation from their employees. Employee resources, for instance, their competences, ideas, problem-solving and creativity and abilities, can influence innovation when innovative actions are embedded in the employees' everyday work activities (Billett, 2012). Innovation in organisations has to be driven by employees simply because it is the employees who enact work tasks, respond to new tasks and confront new challenges. As such, innovation in organisations should be driven by employees. Nonetheless, organisations with a poor learning atmosphere will not realise the full benefits brought by learning environments such as employee innovation. If the learning atmosphere is suitable and permits for interaction between formal learning activities and learning in everyday work situations coupled with competences developed externally, knowledgeable employees

are developed who are confident of involving themselves in developing and implementing new ideas.

Researchers have looked at the impact of learning organisations on employee innovation (Skerlavaj, Song & Lee., 2010; Yoon & Park 2010; Tseng 2011; Atak 2011). In their research in South Korea, Skerlavaj *et al.*, (2010), found that the culture of learning organisations adopted by organisations in the country supported the culture of employee innovation particularly in technical, administrative and service processes within organisations. A study by Yoon *et al.*, (2010) found that the promotion of learning organisations culture positively influences the creation of knowledge, which positively impacts on team innovation. Similarly, Marquardt, (2002) argues that continuous learning, employee empowerment and knowledge sharing in organisations is developed if they are committed to developing and nurturing a learning culture. To transform into learning organisations, organisations need to learn from their past mistakes and successes so that they can better themselves and maintain their competitive advantage.

4.3.8 Personal Initiative

Personal initiative is a form of proactive behaviour necessary for employee innovation. Unsworth & Parker (2003:11) define “proactive behaviour as a set of self-starting, action-oriented behaviours aimed at modifying the situation or oneself to achieve greater personal or organisational effectiveness.” It involves one admitting that the status quo is no longer pleasant and taking the initiative to improve the situation or by coming up with new ideas to challenge the present situation. Frese & Fay (2001) further categorised personal initiative into three primary aspects which are proactive, self-starting and persistence. Self-starting implies employees are setting goals that go beyond their position requirements. Proactive behaviour refers to one’s long-term focus in expecting future problems and opportunities. Persistence denotes insistence on following of goals during challenging times.

Studies have confirmed that employees with high personal initiative are energetic and have a persevering attitude rather than being lethargic and predictable towards organisational goals (Stroppa & Spieb 2010; Thomas, Whitman, & Viswesvaran, 2010). In their study using a mixed-method approach on expatriates employed by German organisations, Stroppa & Spieb (2011) found a positive relationship between the personal ingenuity of expats and their job satisfaction and performance, while negatively related to job stress. The results of the study revealed that individual initiative is pertinent to working situations that are uncertain, ambiguous and challenging. Several studies suggest that personal initiative positively

influences employee creativity and innovation (Hakanen, Perhoniemi, & Toppinen-Tanner 2008; Binnewies, Ohly & Sonnentag 2007; Ohly, Sonnentag & Pluntke, 2007). In a study conducted by Ohly *et al.*, (2007) on the relationship between personal initiative and the creativity model by Amabile (1988), the results indicated that personal initiative moderates and promotes promoter' suggestions and moderates the association between problem-finding and preparation stage, and directly influences creativity. In their study, Miron, Erez & Naveh (2004), on technicians and engineers from organisations manufacturing superior technologies, the results proposed that creativity is not adequate to achieve innovation outcomes, but that initiative is required to convert new ideas into practice.

The Componential theory states that creativity and innovation are complex consequences of person-situation interaction (Conti, Coon, Lazenby, & Herron cited in Moghimi, 2016). The person-situation relationship emphasises the fundamental role of personal characteristics in contextual organisational factors. Researchers argue that while the CTC established that environmental factors, for instance leadership, are essential determinants of employee innovation especially in-service organisations where employees are responsible for responding to client queries and problems, the concept of personal initiative becomes important (Cabarcos, Pinho & Rodríguez, 2015). For example, Rank, Carsten, Unger & Spector (2007) found elements of extra-role behaviour to influence proactive customer service performance, perceptions of service quality and the ability to respond to customers' demand. In their study of Portuguese hotels, Cabarcos (2015) established that personal initiative is essential for employees involved in customer contact as it influences the quality of the service offered and affective commitment. Therefore, the significance of the association between personal initiative and innovative behaviour, leads to the proposition that personal initiative may increase the influence of leadership on employees' creativity and innovation.

4.4 Demographic Characteristics and Employee Innovation

This part of the study focuses on the influence of demographic characteristics on employee innovation. Included are demographic characteristics such as age, gender, work experience and level of education.

4.4.1 Age

According to Rietzschel & Zacher (2015) there is a general view that senior employees are less creative and innovative than their junior employees. More senior employees are often perceived to be less open to change, less flexible and less motivated (Ng & Feldman, 2012). It is believed

that ageing does not bring any changes in the physical functioning, affective, cognitive and other changes that bring about creativity and innovation in the individual (Salthouse, 2012). For instance, as employee's age, their mental and problem-solving abilities decline. Rietzschel & Zacher (2015) point out that solving new problems is essential for creativity. They further state that as people age their creativity and innovation lowers. Also, Rietzschel & Zacher (2015) argue that detrimental age-related stereotypes have adverse effects on older employees' innovative performance because they undermine relevant self-efficacy beliefs. This notion is reinforced by empirical evidence from previous studies which proposes a generally adverse relationship between age and innovative performance (Ng & Feldman, 2008; Hertel & Zacher, 2016).

Despite the increase in studies on age and work practices increasing over the past decade (Hertel & Zacher, 2016), not many studies have focused on the relationship between age and employee innovation. Generally, studies have focused on age as a factor influencing innovation while in other studies age is set against the measure of innovation as a significant characteristic of work performance. In a meta-analytical research on 98 empirical studies on the relationship between age and different dimensions of work performance including innovation (Ng & Feldman, 2008) the results indicated that longer-tenured employees do not engage in less innovation-related behaviour than their younger and more junior counterparts. In another meta-analysis from the same researchers when they focused on the bivariate relationships between age and innovation-related behaviour like idea generation, dissemination and implementation, the results again showed that age is generally unrelated to the innovation-related behaviour.

Rietzschel & Zacher (2015), argue that the meta-analytical studies discussed above, are mostly founded on cross-sectional data, therefore, they should not lead to the reasoning that employee age and ageing are completely irrelevant to creativity and innovation. While, studies have described that the relationship between age and employee innovation is not a simple, zero-order relationship, moderated studies on contextual job factors, such as job-related resources, individual variances in personality and contextual characteristics have also been conducted. For example, in a study on the relationship between job resources, age and innovation, the results showed positive relationship between employee age and creativity/innovation with job autonomy as a moderating factor (Binnewies *et al.*, 2008).

Zwick, Frosch, Hoisl & Harhoff (2017) also found a positive relationship between age and creativity with the results being supported by the argument that employees who are successful

in innovation remain in the line of inventing. Zwick *et al.*, (2017) argued that the reputation of successful innovation works as inspiration for ageing employees to continue with the process of idea generation processes which eventually results in innovation. When the newer generations fail in developing new ideas and innovation, older employees with experience in innovation will persist. Based on these arguments, Zwick *et al.*, (2017) suggest that a positive relationship exists between age and innovation. Furthermore, Wattal, Racherla & Mandviwalla (2017) in their study of employee adoption of corporate blogs they discovered a positive relationship between employee age and external collaboration. They found older employees to have reliable and quality networking relations which means access to information, resources and sharing of ideas. As a result, more senior employees form networks that contribute valuable information to the innovation process.

Although empirical studies on age and employee innovation are scarce, it appears clear that the relationship between age and innovation requires a more robust and sophisticated approach than mere focus on direct or zero-order relationships.

4.4.2 Gender

The relationship between gender and employee innovation seems to produce contrasting views with some scholars saying men are more innovative, while others say women are more innovative. Some researchers argue that the relationship between the two is gendered as it found on views that support men and certain forms of masculinity as the norm (Nyberg, 2009; Blake & Hanson, 2005; Lindberg, 2012). Earlier research on the relationship between these two constructs confirmed that a relationship does exist between masculinity and innovation specifically in the field of science and engineering (Dautzenberg, 2012; Marlow & McAdam, 2013).

On the other hand, Rosa *et al.*, (2014) maintain that women are more innovative than men within all age groups. Furnham & Nederstrom, (2010) state that there is a relationship between gender and innovation, and that women tend to be more innovative when it comes to coming up with new concepts to improve existing products. Nonetheless, the results by Furnham & Nederstrom (2010) show only a moderate correlation between gender and innovation.

On the other hand, studies have indicated that there is no distinctive effect of gender on innovation (Binnewies *et al.*, 2008). For example, in their study on measuring the interplay between cognition, emotion and motivation in innovation, Soroa *et al.*, (2015) found that variances in thinking styles and motivation towards innovation among employees lacked

gender effects. Other studies found contrasting results on the relationship between gender and innovation (He & Wong, 2011; Cheung & Lau, 2010). The findings of their studies were credited to differences in cultural and emotional experiences in specific samples that were tested, for example, girls from single-gender institutions. Therefore, the findings from previous studies cannot be generalised and applied to the entire female/male population. Due to the contrasting results in the literature, the interceding effect of gender on innovation should be substantiated.

Tartari & Salter (2015) state that for employee innovation to be successful employee's needs to collaborate in the generation and implementation of new ideas. However, research has found that women form fewer types and participate less in these relationships (Berger *et al.*, 2015 & Jappelli, Nappi & Torrini, 2017). Berger *et al.*, (2015) found that women tend to have fewer network relationships than their male counterparts. Also, Jappelli *et al.*, (2017) established that women are at a disadvantage when it comes to nurturing strong networks.

Despite the observations discussed above, gender perceptions in employee innovation studies are rarely seen. Alsos *et al.*, (2013) reason that the dearth of research on gender perspectives with regard to employee innovation warrants further research. Also, contrasting views on the relationship, as discussed above suggest that more research should be conducted.

4.4.3 Work Experience

Work experience plays a significant role in influencing employee innovation. According to Dong *et al.*, (2017), work-related knowledge and skills are essential elements that support employee innovation. Anderson & Potočnik (2014) contend that work-related knowledge and skills can be combined with new ideas to produce unique ideas that can be developed into new products. Naude (2017) claims that this explains the bond between work experience and innovation, where the skills sets gained from task experience is joined together with new insights to make unique products.

Ng & Feldman, (2013a) found that more work experience increases both procedural and declarative knowledge. Declarative knowledge refers to an understanding of guides, principles and facts while procedural knowledge is concerned with the use of these in practice. An increase in knowledge in these aspects results in increased work experience which enhances innovative performance in employees. Employees become more proficient in their work as experience accumulates, and in the process, they generate successful ideas. Lee & Walsh, (2016) state that the ideas generated are based on the knowledge and skills obtained from

previous work experience. Therefore, employees with more work experience are perceived to be more innovative. Nonetheless, it is suggested that employees with more previous work experience get trapped in routine work activities, and these routines can be detrimental to innovative solutions (Binnewies *et al.*, 2008).

Furthermore, Okamuro, Kato, & Honjo (2011) suggest that prior work experience makes a constructive difference in teaming up with exterior parties for research and development purposes. Okamura *et al.*, (2011) state that these external parties assist in idea generation. Lee & Jung (2017) argue that increased work experience results in strong partnership with regard to transfer of knowledge. Therefore, there is a positive relationship between prior work experience and transfer of knowledge. The knowledge transfer resulting from partnerships can lead to the formation of links necessary to form a new idea and subsequent innovation.

Also, researchers concur that previous work experience is significant for employees to build networking relationships necessary for transferring ideas and innovation (Van Rijnsoever & Hessels, 2011; Lee & Jung, 2017). Nonetheless, it is also argued that as employees continue to relate and collaborate with others from prior work relationships, their knowledge becomes rooted in those people (Van Rijnsoever & Hessels, 2011). However, the relationship deteriorates after some time as no new ideas and knowledge come from the former colleagues anymore.

4.4.4 Level of education

The level of education one possesses influences his or her innovation capacity. Cheng *et al.*, (2016) state that higher levels of education results in higher levels of idea generation and innovation in employees. Anderson & Potočník, (2014) also argue that increasing levels of skills and knowledge in a particular field is one of the effective ways for employees to improve their ability to innovate. When employees develop a set of skills, they are more likely to find solutions to problems that emanate within a particular field where the skills are required. Naude (2017) reasons that unique solutions result from knowledge obtained when individuals increase their knowledge base. The underlying assumption is that when individuals grow their expertise, they are likely to find innovative ways to satisfy their clients mainly because they possess the skills sets required to do so.

Caner & Tyler (2015) supported the notion that the level of education increases the ability of individuals to innovate through strategic relations. They argued that when strategic partnerships are formed with external links who are subject matter experts, they result in

innovations as employees tap ideas from these new alliances. Also, Cui *et al.*, (2014) believe that a level of knowledge and skill is required when employees are to interpret the information acquired from external sources. Baruffaldi, Di Maio, & Landoni, (2017) reason that the level of education an individual possesses is essential when it comes to collaboration and knowledge transfer. Thus, a higher level of knowledge and skills is essential for knowledge transfer to be successful.

Another perspective calls for high skills being needed to ensure the efficient use of innovative new technologies. Leiponen (2005) argues that organisations benefit less from innovation when employees lack essential skills due to absorptive capacity. Toner (2011) highlights that organisations should have skilled employees if they are to introduce or produce new technologies. High levels of knowledge and skills are essential for adaptation and absorptive capacity. Naude (2017) claims that the ability to take part in innovation depends mostly on the technological absorptive capacity of the employees, largely considered as the ability to take on, adapt to and disseminate improved or new production processes, products and organisational innovation. Zouaghi & Marco (2017) claim that problem-solving and absorptive capacity ability of an employee grows due to increased education. Zouaghi & Marco (2017) add that this results from the creation of diversity in knowledge structures. Building on this argument, Zwick *et al.*, (2017) argue that higher levels of skills, especially at the doctorate level, is linked to the number of copyrights of an individual. Accordingly, more new ideas that result in patents are generated by individuals with higher levels of education.

It is assumed that there is a reciprocal relationship between upgrading skills and innovative activity. Naude (2017) reasons that this is supported by the Ellstrom 2010's theoretical submissions on practice-based learning according to which practice-based innovation is a result of the cyclical learning process. The assumption is that when employees are involved in practice-based learning, it increases their innovation capacity. However, a study on creativity and innovation competences in adult education in Denmark by Rasmussen (2009) refutes this assumption when it reported that most employees regardless of background, did not perceive continuing in education to be significant in increasing their ability to demonstrate innovative competences. The findings call for further research on the relationship between work-practice-based knowledge and innovation within employees.

The discussion above provides a background of the relationship between demographic studies and employee innovation. However, there is a dearth of literature on this relationship

particularly in Sub-Saharan Africa. The present research sought to address this gap in the literature by exploring the interplay between demographic studies and employee innovation in the manufacturing sector organisations in Zimbabwe.

4.5 Employee innovation outcomes

The concept of employee innovation plays a significant role in organisational success. Li & Zheng (2014) claim that the performance of an organisation is reliant on the innovation behaviour of its employees. Bratnicka & Bratnicki (2013) suggest that employee innovation is associated with higher levels of organisational performance. This implies significant potential consequences for organisations implementing employee innovation. If innovation makes the organisations perform better, it should then be a priority for organisations.

Sadikoglu & Zehir (2010) state that employee performance is essential for any organisation, and it is a measure of the organisation's success. Manzoor, Ullah, Hussain & Ahmad (2011) maintain that employee performance measures the organisation's non-financial indicators such as teamwork, motivation, productivity, service quality and competency.

Osman, Shariff & Lajin (2016) reiterate that organisational performance improves through employees as they generate new ideas for products and services. Innovative activities, therefore, improves an organisation's effectiveness and efficiency, profitability, products and services, among others.

This section of the study discusses the outcomes of employee innovation. The consequences of employee innovation have largely been discussed under firm-level performance. Mai, Van Vu, Bui & Tran (2019) maintain that the influence of employee innovation on firm-level performance cannot be determined from single perspective. In this regard, this section of the study focuses on various firm-level performance outcomes emanating from employee engagement. These include profitability, in-role performance, and superior and quality goods.

4.5.1 Profitability

Employee innovation impacts positively on the profitability of an organisation. Mwesigwa & Namiyingo (2014) state that the relationship between employee innovation and profitability has been widely studied (Mai, Vu, Bui & Tran, 2019; Von Nordenflycht, 2007; Aas & Pedersen, 2011). For example, in a study by Mai *et al.*, (2019) on the effects of innovation on firm profitability in a transitional economy using panel data set from year 2005 to 2015, the results indicated that innovating organisations achieved higher profits than non- innovative

organisations. According to Mwesigwa & Namiyingo (2014), the effect of innovation on profitability often increase the short-term costs of an organisation, but over time the implementation of these new ideas results in increased profit growth for the organisation. This view is reinforced by Mai *et al.* (2019) who argued that the positive effects of profitability in organisations are not only seen in the short run but also the long run and can be observed through better productivity, ability to secure government support, better access to formal credit and higher export probability. Also, Geroski (2000) claims that organisations often notice an increase in profitability when they encourage innovative employee behaviour. As such, organisations that support innovation experience increased profit growth, and subsequently firm performance.

Employee innovation improves an organisation's efficiency. The involvement of employees in improving work processes is a significant step in reducing the wastage of resources in organisations. Innovation plays a part in minimising production-associated costs as the organisation efficiently uses their resources. Orso, Ziviani & Barattini (2018) believe that when organisations utilise their resources efficiently, production-related costs are reduced, which impacts positively on the organisation's productivity levels. Increased productivity through optimum utilisation of resources increases the profit margins of organisations as they use less to produce their goods and services. Consequently, organisations that encourage innovation experience increases in profit growth, and subsequently, firm performance.

Empirical evidence from different countries supports the view that innovation influences firm-level performance (Rajapathirana & Hui, 2018; Howell, 2018; Spescha & Woerter, 2018; Leiponen, 2000). Recent studies by these scholars from different nations have recognised that innovation and its types bring financial value to organisations which enhances firm performance. Using a panel data set from English organisations (Geroski & Machin, 1992; Geroski, Machin, & Van Reenen, 1993) as cited in Mai *et al.*, (2019) it was found that organisations that support employee innovation are more consistently profitable than non-innovating ones as they have employees with superior internal capabilities who introduce several innovations over time thus gaining higher market share from competitors.

Evidence from the studies discussed above suggests that employee innovation plays an essential role in determining an organisation's profitability. Organisations, therefore, should play a critical part in enhancing innovation from their employees if they are to enjoy a high-profit margin successfully.

4.5.2 In role performance

Employee innovation affects in-role job performance positively. Research confirms that innovative employee behaviour enhances role-job performance (Harari *et al.*, 2016). In-role job performance refers to tasks related to an employee's prescribed role requirements or tasks that are specified in a job description (Borman & Motowildo, 1997). Innovative behaviours are more or less introduced to solve problems in organisations. This, therefore, indicates that when employees encounter challenges with their tasks, they will engage in the innovative behaviour as they know that developing a new method will be helpful to find solutions to the problem. Accordingly, this will enhance their role performance.

Employee innovation significantly influences employee efficiency. When employees innovate, this improves their task performance as they find and design new ways of improving their work processes. Yuan & Woodman (2010) argue that employee innovation results in coming up with new work methods which are superior to existing ones. The application of new forms of doing work results in better performance of the employees. Janssen (2004) contends that while the ways of doing work may interrupt job routines and in some cases cause stress reactions and resistance to change from other employees, in the end, it may lead to effectiveness and efficiency gains for the organisation.

Employee innovation entails altering oneself and the work environment through innovation (Janssen, van de Vliert, & West, 2004). This means that innovation assists individuals to cope with changes in the job thus resulting in the required enhanced job performance. Judge *et al.*, (1999) discovered that effective managing of change positively impacts on performance. Also, studies indicate that innovative performance and performance quality and efficiency are positively correlated. For instance, in a study by Raja & Wei (2015) on innovation performance and quality practices relationship in different industries in China, the results indicated that regardless of the industry a positive relationship exists between quality practices and firm innovation performance. The relationship between innovative performance and performance quality, therefore, suggests a positive relationship between employee innovation and task performance (Miron, Erez, & Naveh, 2004).

Managers in organisations should encourage employee innovation if it enhances employee task performance. Mwesigwa *et al.*, (2014) argue that without adequate motivation employee innovation may not lead to better organisational performance. Gong (2009) highlights that managers may empower and motivate their employee through leadership styles such as

transformational leadership, which can inspire employees to put their best efforts into innovation. Tierney & Farmer, (2004) also found that when managers support employee innovation, it initiates innovative action and maintains innovative levels in the organisation, which in turn improves organisational performance as outstanding innovation results in better work processes. Accordingly, employee innovation becomes an influential antecedent of firm performance.

4.5.3 Superior and Quality products

Employee innovation is seen as a strategic instrument for developing and expanding the capacity of organisations. When organisations innovate, they find new and better ways to improve their products and services. This is referred to as product innovation, which is the introduction of new goods and services or which are greatly improved in their intended uses or characteristics (Osman, Shariff & Lajin, 2015). Employee innovation results in the generation of new ideas which are developed into new products and services, which eventually increases the competitiveness of the organisation. Awan & Kashif (2015) claim that human capital is the one thing that creates innovations and therefore, organisations should pay attention to the development of human capital.

When employees develop better and new ways of doing their work, it improves the quality of their products and subsequent performance of these products in the marketplace. The development of new and improved products may result in organisations finding new markets. O'Connor & DeMartino (2006) reason that innovation results in employee-driven growth through the development of new lines of business that bring new features to the market. These innovations can lead to the development of entirely new markets. When organisations find new markets, it enhances their competitiveness and survival as the customer base for its products increases. Developing new and unique products assist organisations to react to market forces arising from the changes in consumer preferences and globalisation trends effectively (Wong & Ladkin 2008; Ottenbacher 2007). This is similar to studies which contend that innovation is an essential factor that contributes to a competitive advantage over others and impacts positively on the organisation's long-term success (Janssen, Van de Vliert, & West, 2004; Birkinshaw, Hamel, & Mol, 2008).

Employee's innovative ideas have been found to increase organisational effectiveness and the quality of products offered by the organisation (Wong & Ladkin, 2008; Kattara & El-Said, 2013; Tajeddini, 2010). When employees innovate, it leads to product personalisation,

differentiation and customisation, which are critical factors in satisfying and maintaining the organisation's clientele base (Roy, 2011). Also, when organisations produce superior products that are client-specific, clients become loyal to them. This is important in that it enhances the organisation's long-term survival. However, researchers have also argued that it is difficult to determine how an employee innovation impacts on product quality. For instance, Shi, Wang, Sun & He (2016) argue that in innovation the emphasis is on exploring new possibilities through routine-breaking and risk-taking, which undermines the variation, stability and standardisation required for quality management. Empirical evidence supported this argument. Gourville (2006) found that innovative products have a high failure rate, and this is mainly because of unmet quality expectations. The opposing views discussed above suggests that more research should be done to ascertain the relationship between innovation and quality of products produced by an organisation. As such, managers can play an essential role in assisting employees in determining innovative ideas that will enhance or produce high-quality products.

4.6 Employee Innovation in Zimbabwe

Globalisation has increased competition between organisations the world over. Dobbs, Manyika, & Woetzel, (2010) highlight that the global economy is experiencing an increase in emerging markets, increased influence of technology on market forces and increased flows of trade, data and people. The increased competition has forced organisations to turn to innovation as a solution to fend off the increased competition. The effects of globalisation have also been affecting organisations in Zimbabwe. Employee innovation is one way through which organisations in the country can use to survive the competition being caused by globalisation. As discussed above, it can be seen that employee innovation is essential to organisational performance.

Economically, Zimbabwe has experienced mixed fortunes. The prevailing economic conditions being experienced in the country have not been conducive to the promotion of employee innovation. At present organisations are struggling to make their employees happy as their salaries are being eroded constantly by inflation. This situation has impacted negatively on factors such as organisational citizenship behaviour, job satisfaction and employee engagement, which are vital for employee innovation. The current economic situation in the country, together with increased competition from globalisation means organisations in the country should promote employee innovation if they are to survive the global competition.

Ryder (2015) maintains that Zimbabwe is a nation that inherited a diversified and sophisticated industrial sector at independence in 1980. The industrial sector was second-best in southern

Sub-Saharan Africa. However, the country has been overtaken by other countries due to mixed decades of industrialisation. The mixed decades also affected employee innovation in the country. The first decade from independence saw Zimbabwe's industry booming up until the country adopted an economic structural adjustment programme in the early 1990's. This structural adjustment programme affected economic growth and industrialisation in the country. Nonetheless, during this period, the country still enjoyed significant levels of automation.

Zimbabwe saw itself being placed under economic sanctions due to political reasons. The period from the late '90s saw the country going through a land redistribution programme (Hove, 2012). This period negatively affected agricultural production and its mechanisation as land was redistributed mostly to those who did not have the financial capacity to support agricultural mechanisation (Shonhe, 2018).

The land redistribution era culminated in a hyperinflationary period that changed the country in 2008. During this period many organisations were forced to close, and production in the country was at its lowest. To curb the situation, Zimbabwe introduced a multi-currency system in 2010, which stabilised the economy and promoted economic development for a while. This period saw companies reopening and production increasing. The reintroduction of the Zimbabwean dollar in 2018 saw the hyperinflationary period returning to the country. This period has had adverse effects on the operational activities of organisations, which also meant that employee innovation is not spared from the myriad of problems the country is facing. Ryder (2015) notes that the economic decline in Zimbabwe and its key enablers have had its consequences. Not only has it affected jobs losses but has struck the country's industrialisation. United Nations Industrial Development Organisation (2015) states that without development, innovation will not occur.

The future of work in Zimbabwe rests in the hands of Zimbabweans. The rate at which the fourth industrial revolution occurs in Zimbabwe depends on the ability of locals to be innovative and also to take up global innovation (Lewanika, 2015). Nevertheless, this depends on the approach the state takes towards the world of work which includes its speed towards acceptance and encouragement of innovation. Luwanika (2015) adds that Zimbabwe can turn its current situation around. The country is endowed with a talented workforce which if supported and adequately engaged, can improve the country's innovation capacity. It is from this context, that the present research seeks to validate whether or not employee engagement

and skills development will impact on employee innovation positively, a construct that is significant for increased competitiveness in the market.

4.7 Chapter Summary

The present chapter focused on the concept of employee innovation. The chapter commenced with a discussion of the meaning of employee innovation. This was followed by a discussion of the employee innovation enabling factors. Also, discussed in the chapter was the relationship between demographic factors such as age, gender, level of education and work experience, and employee innovation. Consequences of employee innovation particularly firm performance was also discussed. Lastly, a discussion of the state of innovation in Zimbabwe was presented.

CHAPTER FIVE

THEORETICAL PERSPECTIVES: SOCIAL EXCHANGE THEORY, HUMAN CAPITAL THEORY & COMPONENTIAL THEORY OF CREATIVITY

5.1 Chapter Introduction

The foregoing chapter explored the concept of employee innovation. In the chapter, the meaning, factors influencing employee innovation, outcomes and employee innovation in Zimbabwe were discussed. This chapter presents the theoretical perspectives that guided this research. The theoretical perspectives were selected because they provided a framework for explaining the three main variables of this research which are employee engagement, skills development and employee innovation. The chapter commences with a discussion of the Social Exchange Theory which guides the concept of employee engagement. A discussion of the Human Capital Theory which is used to explain the concept of skills development will then follow. The Componential Theory of creativity will then be discussed to explain the concept of employee innovation.

5.2 Historical development of the Social Exchange Theory

The Social Exchange Theory (SET) is a theory that has evolved since the 19th century. According to Xerry (2013) the development of the theory dates back to the works of Gouldner (1960), Homans (1961) and Blau (1964). The early development of the theory suggested that social exchange is an exchange between two or more people and that interchange could be costly or rewarding for those involved (Homans, 1961). Homans's thinking was premised on the belief that the more specific action by an individual is rewarded, the more likely the action is to be repeated. Heath (1976) adds that the pursuit of social rewards moves people to enter into relationships with one another. As a result, the professed reward that is likely to come out because of an action determines whether the relationship continues or not. Usadolo, (2016) in explaining this relationship adds that in the workplace context if an employee is not rewarded according to the professed rewards, this is likely to result in the discontinuation of the relationship.

Gouldner's (1960) work on the norm of reciprocity provided insights into the SET. Explaining the norm of reciprocity, Gouldner (1960) states that this is a mutually gratifying pattern of giving and receiving which is fundamental to the norms of social interaction. Additionally, reciprocity is a form of social interaction and is founded on the principle that people should help those who have helped them in the past and people should not hurt or plan to hurt those

who helped them in the past (Gouldner, 1960). According to Gouldner (1960) the desire to reciprocate is an internalised sense and therefore functions as an instrument in which a social system is retained as people can relate to each other because of their understanding of the norm involved. Accordingly, due to the nature of the norm reciprocity shaping the way people relate to each other, people feel indebted as a result of receiving something from someone and that feeling drives them to do likewise. Usadolo (2016) adds that the norm of reciprocity helps to maintain social relations as the feeling of indebtedness helps the parties to the exchange to remain in the exchange system because of the desire to have a chance to respond with something of better value.

Adding to the work of other scholars in the field of social exchange, Blau (1964) contends that the SET emphasises two important concepts which are ‘discharge’ and ‘unspecified returns’. Blau (1964) argued that the provision of something of value to another person puts that person under an obligation to reciprocate, which is the need to discharge the debt. Conversely, continued failure to reciprocate leads to fewer offers in the future and a sense of disrupted expectation on the part of the giver, which affects the quality of the relationship (Blau, 1964; Gouldner, 1960). Furthermore, the notion of ‘unspecified returns’ brings up to the vagueness of social exchanges; that is the exact nature, value and timing of any return which depends on the discretion of the recipient (Blau, 1964).

Based on the earlier conceptions of SET discussed above, it can be noted that SET is founded on the principle of reciprocity, which provides a foundation for exploring social relationships and their exchanges. The present research, therefore, assumes that the social exchange, which occurs in these social relations explains how individuals interact in the workplace which is an imperative consideration for this study.

5.2.1 The Social Exchange Theory

According to Xerry (2013) social exchange theorists suggest that it involves a series of interactions that over time generate obligations and liberties between workplace social network members (Åmo, 2006; Cook & Whitmeyer, 1992; Cropanzano & Mitchell, 2005; Maurer, Pierce, Shore, 2002). Social exchange theory suggests that social behaviour and relations among individuals are an outcome of an exchange process. This viewpoint proposes that the relations between persons is created by the need for rewards and benefits and the evasion of costs and punishment (Wan & Antonucci, 2016). Other scholars have suggested that core tenet of the theory is that relations grow into loyal, trusting, and mutually beneficial obligations over

time when both actors abide by the rules of the exchange (Mitchell, Cropanzano, & Quisenberry, 2012). This is in line with the work of Blau (1964) whose view is often used in social exchange deliberations in that it involves “voluntary actions of individuals that are motivated by the returns they are expected to bring and typically do bring from others.” The expectation of returns from others explains the norm of reciprocity, which is central to how people behave in the workplace.

Reciprocity within an organisational setup refers to the cooperative exchange between parties to the employment relationship. More specifically, the principle of reciprocity assumes that one good deed or exchange will be repaid by the receiver of the deed at some point in time (Xerry, 2013). This suggests that a good social exchange between the employees and employers helps sustain positive working relations that stimulate positive working behaviour such as trust, commitment, engagement and greater performance. Xerry (2013) further claims that when employees are content with consequences of their workplace relations, they tend to respond by satisfying obligations they have to their superiors and/or employing organisation. In this regard, mutual social exchange relations are cultivated by the parties involved only if they consider the exchange to be of value and if they feel they can contribute.

While the SET involves one individual doing a favour for another and in expectation of a future return, lack of it may destabilise in the relationship. In the same context, Usadolo (2016) argued that though the anticipated return in the relationship is not known or stated, a continuous lack of return or an unstable exchange may cause an imbalance in the relationship. Such an unbalanced relationship in a workplace setting will affect both employees’ attitudes and trust. Accordingly, satisfying the duty of paying back what has been received is fundamental to social exchange, and as long as the exchange is balanced regarding frequency and value, the relationship will continue to grow (Usadolo, 2016).

5.2.2 Different types of Social Exchange relationships

The relationship between employees and their organisations is usually referred to as an exchange relationship. This exchange relationship is primarily a contractual relationship with the purpose of the exchange of interests between two subjects of interest. This contractual relationship could be explicit or tacit, for instance, the labour contract being explicit whilst the psychological contract being tacit (Yanhan, 2012). The theory of exchange is used to explain relations between employees and their organisations. In this case, human behaviour being led by the principle of exchange, which forms the basis of other human behaviours and social

relations, for instance, putting in additional effort in order to receive more returns from the organisation (Yanhan, 2012).

Social exchange relationships can be in two forms, which are direct and indirect relationships. The two forms of social exchanges differ in terms of how people relate to each other. The direct relationship is a simple exchange relationship which consists of two parties. That is, A and B, with each party controlling the resources that are important for the other party. This dyadic relationship is a restricted relationship in which two parties will exchange favours with one another. Dyadic relationships involve two parties and are mainly based on mutual reciprocity which is the main principle explaining direct exchanges. The application of the dyadic relationships provides a better understanding of reciprocal relationships that produces positive organisational outcomes.

The indirect (generalised) relationship involves three or more parties exchanging favours. According to Molm, Collet & Schaefer (2007) in this type of a relationship there is no direct reciprocity between the exchange parties. Xerri (2013) contends that if one party receives a benefit from another, the benefit is not subject to what they have received from this party in the past. This is an exchange relationship where the party's benefit indirectly from what has been exchanged and is incumbent upon those involved in the exchange relationship to ensure that the exchange system is maintained to ensure the continuity of the relationship (Usadolo, 2016).

Furthermore, the indirect relationship may be broken down into chain or net-based relationships. Xerri (2016) adds that a generalised chain involves a connection from one individual involved in the set of social exchanges to the next and so forth. For instance, individual 'A' exchanges with individual 'B', who exchanges with individual 'C', who exchanges with individual 'A'. Using this example, a generalised social exchange chain is created between these three individuals. Conversely, the generalised net-based exchange suggests that individuals contribute to a group as a whole, not simply to individuals within the group. Consequently, those involved in the exchange benefits directly from the group and not separately from individuals within the group (Xerri, 2016).

The exchange relationships in the SET can also be explained using two dimensions of resources that govern work relationships. These dimensions include duplicability and transferability. On the one hand, duplicability denotes the actual exchange and whether the receiver of the information, knowledge or resource retains control of the property following the exchange. For

instance, information and assistance could be exchanged between many people since it is easily duplicable (Schaefer, 2009). Nevertheless, it is important to note that some goods may not be duplicated and usually have only one exchange partner for each particular good. Although more of a particular good can be made, it will have only one exchange partner.

On the other hand, transferability refers to whether the receiver of the information, knowledge or resource is free to exchange the property in other exchanges. For instance, information can be transferred easily from one individual to another, although it may be more difficult to transfer assistance, especially if the assistance requires the transfer of tacit knowledge (Schaefer, 2009).

Furthermore, social exchange relationships are developed using the Equity Theory (Lin & Huang, 2010). The Equity Theory was propounded by Adams in 1963 who proposed that equity can be explained from an exchange, a social comparison or a dissonance perspective. The Equity Theory focuses on an individual's insights of being equitably treated in their workplaces. The theory is premised on the idea that individuals are driven by the ratio of inputs and outputs they receive in contrast to others (Muchinsky & Culbertson, 2015). The inputs are the things people put into their jobs, for instance, time, effort and commitment. Whereas the outputs are what individuals get out of their jobs, for instance, remuneration, praise and other benefits. The theory states that if there is a discord between the inputs and outputs, employees may reduce their level of effort or reciprocal behaviour based on how they view the relationship. For that reason, in the context of this study, employees become engaged in their work because of the expected outcomes, which in turn propels them to display positive behaviour such as increased effort, commitment and propensity to innovative.

5.2.3 Elements facilitating exchange processes

The SET provides the basis for the study of relationships in organisations. According to Usadolo (2016) the development of, and sustainability of, positive social exchanges is imperative because it results in stable and amicable organisational relations that result in positive workplace outcomes. In other words, excellent social exchanges enhance feelings of organisational commitment and self-belonging to the organisation. These positive attitudes result in valuable outcomes for organisations, such as greater levels of performance, job satisfaction and organisational citizenship behaviour. Therefore, in order to facilitate the exchange process, it is important for organisations to provide enabling environments. Usadolo (2016) adds that building an environment that encourages high-quality workplace

relationships, requires both parties in the exchange process to adhere to the norms of the relationship.

The quality of relationships between supervisors and managers is also an important element in facilitating the exchange process. In the workplace, social exchanges might include strong job performance, high commitment and job satisfaction, low rates of turnover, low levels of absenteeism, and favourable supervisor-employee relationships, among others (Bernerth, & Walker, 2009).

Supervisors are regarded as agents of the organisation as they are in constant touch with the employees. At the same time, they can influence the relationships that employees have with their organisations. For this relationship to prevail, a relationship of trust should, therefore, be present between the supervisors and employees. Usadolo (2016) argued that relationships are built on mutuality and without trust, they are bound not to survive. In other words, for any supervisor/ subordinate relationship to survive trust is imperative. Trust is a relational construct between two or more parties. It develops mutually between people involved in time-tested interactions (Blau, 1964). When trust exists, people work efficiently to the best of their ability to align around a mutual goal, take shared risks, support each other and communicate openly and honestly. Trust, therefore, is an important element that must be managed carefully in organisations. Reina, Reina & Hudnut, (2017) contend that for organisations to cultivate positive outcomes it is imperative for supervisors over time to build their trustworthiness with employees by constantly being reliable, keeping promises, being fair and honest with employees, and showing respect for them. Similarly, Usadolo (2016) claims that a relationship between a supervisor and an employee is based on mutual trust and fairness, the relationship will expand positively to the benefit of both the organisation and the individual. Consequently, supervisors should play an important role in facilitating social exchanges in the workplace such that employee relationships over time enable them to develop trust in each other.

The norm of reciprocity is a fundamental feature of the SET. It explains the motivation behind employee behaviour and the development of positive attitudes. The norm explains positive actions by one person to another who in return is expected to provide actions of equivalent value. Wahrendorf, Ribet, Zins, Goldberg & Siegrist (2011) argued that if the norm of reciprocity is violated because a service in return does not meet the agreed measure of equivalence the social relationship is threatened. Also, in case of its continuance, if strong negative emotions of anger and frustration are elicited among those concerned this may result

in those involved having a sense of being treated unfairly and in an unjust way. In this regard, it is essential that a supportive environment exists in organisations such that employees can involve themselves in reciprocal behaviour in order to fulfil obligations to either the supervisor or the organisation or both. Reciprocity over time results in employees collaborating with their superiors and the organisation at large. This will promote shared understanding in the organisation under circumstances where issues and challenges are easily solved to attain organisational objectives.

5.2.4 Limitations of the Social Exchange

The SET has its limitations. The SET assumes that rewards and costs determine relationship decisions, that is, individuals will decide whether a relationship is worth pursuing after a rational calculation of the costs and benefits. Redmond (2015) argued that one of the fundamental questions asked of the theory is the extent to which people are as rational and calculating as what it assumes them to be. The fundamental question to answer then is in relationships how often do people weigh the rewards and costs, to determine the profits (or advantages), projecting these into the future and comparing alternatives (Redmond, 2015). In other words, it is difficult to quantify the costs and benefits in the exchange relationship as this involves subjective opinions.

Many studies have used the SET in an attempt to explain organisational behaviour and workplace relationships (Cropanzano & Mitchell, 2005; Shore, Coyle-Shapiro, Chen, & Tetrick, 2009). Scholars have argued that there is a lack of experimental and longitudinal research within the SET literature. Many of the researchers have taken the cross-sectional study route, as such, this has restricted the causality that is found from such researchers, therefore, highlighting a gap in the current body of knowledge (Bowen & Wiersema, 1999; Xerry 2016).

The exchange process in the SET mainly focuses on the costs and benefits associated with a relationship. That is whether the benefits outweigh the costs and vice versa. If the costs outweigh the benefits individuals terminate relationships. In this regard, the theory has an over-dependence on an economic approach to relationships. The over-reliance on the economic exchange in relationships makes the theory ignore other factors that can lead to relationship satisfaction such as an individual's rational beliefs (Harper, 2019). According to Harper (2019), some people believe that if you are in a committed relationship, you should be devoted to the confines of that relationship. This reasoning would imply that irrespective of the costs associated with the relationship, individuals would be more committed to remaining in that

relationship. Thus, the theory fails to clarify individual differences that could possibly impact on relationship satisfaction.

As such, although SET may be considered to be universal, the differences associated with national cultural contexts indicate that the notion of universality requires further empirical testing. To address the limitations within this study is beyond the scope of this thesis; however, highlighting such limitations provides one way forward for future research. With this said, there may be limitations currently associated with SET, some of which can be addressed, nonetheless SET is an appropriate framework for examining organisational factors and workplace relationships associated with employees.

The SET is a theory with universal applicability (Blau, 1964). It is argued that there is little empirical evidence to validate such a claim (Xerri, 2016). Researchers have argued that the way reciprocity is applied differs from culture to culture (Cropanzano, 2005). In this regard, there is a need for further empirical studies to test the universality of the theory due to differences in cultural settings. As noted above, exploring the limitations of the SET is beyond the scope of this study but it does provide a platform for further studies. In this study the SET is seen as the relevant theory as the norm of reciprocity explains why engaged employees display positive workplace behaviour such as organisational citizenship behaviour, innovation and reduced turnover amongst others.

5.2.5 Rationale for using the SET

The SET provides a robust theoretical foundation under which the concept of employee engagement can be explained. The theory is premised on the principle of reciprocity which stems from relations between parties who are in a state of mutual interdependence. The fundamental principle behind the theory is that relations between people develop over time into loyalty and trust if the parties stand by the rules of the exchange process (Cropanzano and Mitchell, 2005). Explaining the norm of reciprocity, Zhu (2012) argued that parties to the exchange want to maximise their values and would want a situation where they would both benefit.

The principle of reciprocity is imperative in clarifying discretionary behaviour in organisations (Sander *et al.*, 2010). When employees receive favourable treatment from their organisations, they reciprocate the positive treatment by carrying out extra role behaviour that benefits the organisation (Caesens *et al.*, 2016). This resonates well with scholars who argued that when employees are satisfied with their organisation's commitment towards them they reciprocate

by displaying positive behaviour such as employee engagement with the organisation's expected behaviour (Jose 2012; Bowen & Ostroff, 2004; Kinnie *et al.*, 2005). This support extended by the organisation is considered significant in promoting employees' commitment, attachment, dedication and proactive behaviour towards their organisations (Caesens *et al.*, 2016). Thus, employees will exchange the organisational support they receive through work engagement.

Zimbabwe's organisations are plagued by low employee engagement levels. It is argued that the significance of employee engagement in Zimbabwe is intensified by its context of reduced profits, shrinking demand and increased competition (Nguwi, 2012). Similarly, Sibanda, *et al.*, (2014) in their study of organisations in Zimbabwe found that organisations in the country faced perennial performance related problems. These problems have negative consequences for the operation of organisations as they fail to fulfil their commitments to employees causing employee morale, engagement, commitment and strained employee-management relationships. Failure to realise employee obligations has negative repercussions on organisations engagement levels. Therefore, in fulfilling these obligations, employees may reciprocate with productive behaviour such as employee engagement which has positive impact on performance.

5.3 Human Capital Theory

This section of the study discusses the theory guiding the concept of skills development. The Human Capital Theory (HCT) by Stacy Adams (1776) has been used to guide the concept of skills development (Hadir & Larech, 2015). The theory focuses on training and development (T&D) as a form of investment in human beings.

5.3.1 Conceptualisation of the term Human Capital

The concept of human capital dates back to the works of Adam Smith in 1776. Smith claimed that it involves,

“The acquisition of talents during education, study, or apprenticeship, costs a real expense, which is capital in a person. Those talents are part of his fortune and likewise that of society” (Goldin, 2016: 1).

Thereafter, many other definitions of the term have been conceptualised. For instance, human capital could be understood as knowledge, skills, ability and experience of people to accomplish their jobs. Therefore, developing human capital involves increasing the skills and

capabilities through investing in education and training (Akhtar, Renyong, Khaskheli, Ali, 2015). Other scholars conceptualised the term human capital as

“the knowledge, skills competencies, and attributes embody in individuals that facilitate the creation of personal, social and economic well-being (Fugar, Ashiboe-Mensah & Adinyira, 2013: 466).”

According to Kucharcikova (2011: 61), recent theories of economic growth regard human capital

“as the sum of the individual congenital and acquired skills, knowledge, and experiences of individuals”.

From the above conceptualisation, it is significant to note that the definitions reiterated the need for investing more in training and education. Accordingly, Alike & Aibieyi (2014) contend that there is a need to invest in training for organisations to prosper in the modern world of competition. As such, organisations that do not value the importance of T&D in this modern competitive environment are bound not to succeed.

5.3.2 Origins and overview of the theory

The HCT is a theory that is often used to explain employee development in organisations. The theory was developed in the 1960s by economists of education (Becker, 1964, 1976; Mincer, 1962 & Schultz, 1971, 1981) whose initial writings examined the economic benefits resulting from investing in individuals (Gundogdu, 2017). The central idea that resulted from their studies is that investment in people produces economic benefits for individuals and society. The theory focuses on the development of competences and skills of individuals for economic development (Akhtar *et al.*, 2015). In this theory, individuals search for and maximise their economic interests. Accordingly, HCT claims that people invest in training and education anticipating to receive better income in the future (Tan, 2014). Applied in the workplace context, the HCT suggests that an investment in employee training and education will improve their skills levels thereby becoming more productive than their counterparts who are less skilled. The assumption is that training and education increases an employee's ability to perform thus impacting positively on productivity. In this case, the individual benefits in terms of higher earnings whilst the organisation benefits by increasing its production levels. Similarly, Samuel (2010) echoed that the return to an individual comes in the form of higher salaries and better job prospects in the future and the availability of skilled employees on the

part of organisations. Furthermore, Samuel (2010) adds that this bank of skills, ability and knowledge will increase performance and productivity that in turn produces greater economic development of a nation.

Becker (2011) emphasised the significance of investing in training, skills, education, health and other values in people. In one of his writings, he argued that schooling, expenditures on medical care, and lectures on the virtues of punctuality and honesty are also capital. That is because they raise the earnings, improve health, or add to a person's lifetime. Therefore, economists regard expenditure on education, training, medical care, and so on as an investment in human capital, (Becker, 2011). In the same breadth of argument, Olaniyan & Okemakinde (2008) shared the same sentiments regarding investing in human capital. Firstly, they argued that there it is important to transmit correct parts of knowledge which the previous generation acquired to the new generation. Secondly, the new generation ought to be trained on how existing knowhow can be used to introduce new processes, social services, production methods and to develop new products to effect change. Thirdly, people must be motivated to develop entirely new ideas, knowledge, processes, products and methods through innovative approaches. In this regard, the arguments by Becker (2011) and other scholars discussed above regarding investing in skills, knowledge and capabilities to increase performance are central to the present study. These arguments satisfy the assumption that employee skills development is significant in influencing innovation in employees.

5.3.3 Investing in Human Capital: A Resource-Based perspective

The resource-based perspective is used to explain the significance of human capital in achieving competitive advantage. According to Grook, Todd, Combs, Woehr, & Ketcher (2011) the resource-based perspective is one of the most important factors that explains the role played by human capital in organisations to outperform competitors. It is argued that organisations that have human capital that is not easily imitated copied or duplicated will outperform their competition. Thus, explaining the differences in organisational performances (Crook *et al.*, 2011). Organisations aim to have continued competitive advantage over others, therefore, having human capital with unique knowledge and other characteristics is one way of ensuring success in this competition. Crook *et al.*, (2011) further contend that an important assumption about human capital as an important resource is that it is in short supply and already tied to organisations to produce long-lasting superior performances. As such, it is difficult for organisations to copy or imitate resources from other organisations to out-compete with them. Crook *et al.*, (2011) further distinguished between two forms of human capital which are

general and specific human capital. Specific human capital is unique and not easily imitated and is usually firm-specific, therefore, it is the one that creates competitive advantage. Organisations should, therefore, invest in developing specific human capital to ensure sustained competitive advantage over others.

5.3.4 Human Capital and performance

Grook, Todd, Combs, Woehr, & Ketcher (2011) contend that a positive connection exists between human capital and organisational performance. They further argued that management should invest in human capital development campaigns as they lead to positive organisational outcomes. These include retaining talented employees with dynamic capabilities. Grook *et al.*, (2011) further highlighted that human capital development requires sufficient investment and considerable time to harness its potential. Accordingly, organisations should commit themselves to make sure that highly skilled and competent employees are retained to avoid being trained for the benefit of competitors. Cunha, Heckman, & Schennach, (2010) contend that skilled employees at each level are more productive in a human capital organisation by comparison to one that is low. As such, management in organisations is tasked with ensuring that there is a significant investment in human capital to sustain competitive advantage from competitors.

Empirical studies conducted on investing in developing human capital have shown a positive relationship with organisational performance (Bolívar-Ramos, García-Morales, & García-Sánchez, 2012; Bontis, Crossan, & Holland, 2002; Jiménez-Jiménez & Sanz-Valle, 2011; Keskin, 2006; Ussahawanitchakit, 2008). In their study on the influence of investing in technologically dynamic abilities and innovation for organisational performance across information technology organisations in Spain, Bolívar-Ramos *et al.*, (2012), found a positive correlation between technologically motivated dynamics abilities, innovation and business performance. Similarly, Jiménez-Jiménez *et al.*, (2011) found a positive relationship between three variables of their study; learning, innovation and performance when they measured the effect of investing in training and innovation on a firm's level of efficiency, performance and competitiveness.

Results from a study conducted by Oltra & Vivas-Lopez (2013) showed that employers who encouraged dynamic innovation in capacity building and group autonomy are more successful than those who do not. This indicates that group autonomy in terms of innovation through learning and development as well as being involved in managerial decision-making are

important to organisational efficiency. Also, a study by Bapna, Langer, Mehra, Gopal, & Gupta, (2013) revealed that investing in human capital development has considerable influence on employee efficiency in the Indian information technology services industry.

Empirical evidence from the above-mentioned studies concurs with the conceptualisation of the HCT which predicts that investment in employee development has a positive impact on employee performance and work outcomes. Hence, the research question in this study asks whether skills development impacts positively on employee innovation, a work outcome which is significant for sustained competitive advantage.

5.3.5 Limitations of the HCT

Like any other theory, the HCT also has its shortcomings. Oliveira & Da Costa (2014) argue that Becker's research on education does not factor in the role of employee experience at work. Oliviera *et al.*, (2014) add that Becker failed to measure experience, regardless of its significance to employers, who regard it significantly in selection and employment. Also, the concept of ability is an argumentative issue in Becker's initial studies. It is argued that the supposed causal effect relationship between education and earnings could reflect 'ability' instead of any efficiency-enhancing skills obtained through educational.

Oliviera *et al.*, (2014) also argued that the HCT places emphasis on formal education and training whilst neglecting the role played by informal training or learning of employees. While informal learning involves learning by doing or from experience, employees learn a lot from casual experimentation (CIPD, 2017). The HCT overlooks the role played by non-cognitive skills and abilities (Heckman & Rubinstein 2001; West, Kraft, Finn, Martin, Duckworth, Gabrieli, & Gabrieli, 2016). Non-cognitive skills are different from cognitive skills in that they consist of behaviour, attitudes, mindsets, social skills and learning strategies. Whereas cognitive skills involve obtaining knowhow through reasoning, experience and the senses. Non-cognitive skills have a profound effect on how people learn (CIPD, 2017). For instance, an employee could be cognitively strong but if that employee does not have the impetus to attend training programmes within the organisation, the employee may fail to reach his or her full potential.

5.3.6 Rational for using the Human Capital Theory

The HCT was adopted in this study mainly because it explains why people must be developed. Almendarez (2011) argues that investment in human capital development encourages employees to generate new ideas, processes, methods and products through innovative

approaches. The theory is adopted in this study because it aids management and other policy makers by providing a perspective for evaluating the relative efficiency of investing in human capital development programmes that encourage positive individual and organisational outcomes such as employee innovation. The HCT is also adopted in this study because it provides a solid explanation of the amounts and characteristics of skills development required to achieve the desired output levels. For instance, management may be able to determine the amount of training required and its characteristics such as quality to achieve the desired employee output levels.

5.4 The Componential Theory of Creativity (CTC)

The section below discusses the Componential Theory of Creativity. The theory is adopted in this study because it guides the concept of employee innovation.

5.4.1 Overview of the theory

The Componential Theory of Creativity (CTC) by Amabile (1983) is one of the widely used theories to explain creativity and innovation in workplaces. The CTC proposes that four components are essential for any creative and innovative reaction. The theory suggests that three of the components are found within the individual and these are intrinsic task motivation, domain-relevant skills and creativity-relevant processes. One component is external to the individual which is the social environment where the individual is working (Amabile & Pratt, 2016). Intrinsic task motivation refers to the intrinsic motivation to be involved in an activity out of enjoyment, interest, or a personal sense of challenge; domain-relevant skills explaining skills in the relevant domain; creativity-relevant processes referring to the personality and cognitive processes favourable to novel thinking (Amabile, 2012). The component external to the individual refers to the surrounding environment specifically the social environment.

Amabile (1988) offered an addition to the theory by including both creativity and innovation. However, the basic components of individual creativity proposed by Amabile in 1983 remained the same. An assumption was added which states that all four components impact positively on the creativity of teams working closely together. Accordingly, the Expanded Theory proposes that innovation is premised on skills innovation management which is similar to creativity-relevant processes at an individual level; resources in the task domain being equivalent to domain-relevant skills; motivation to innovate being similar to task motivation. According to Amabile (1988), these components create the workplace environment impacting individuals and teams.

The CTC highlights that for an individual to be creative there should be a convergence of all components. The theory states that there is a high degree of creativity in an individual when his or her relevant domain skills and creative-relevant processes connects with the individual's strong intrinsic motivation in a workplace environment which supports creativity and innovation. The convergence of all the components is highlighted in Figure 1 below:

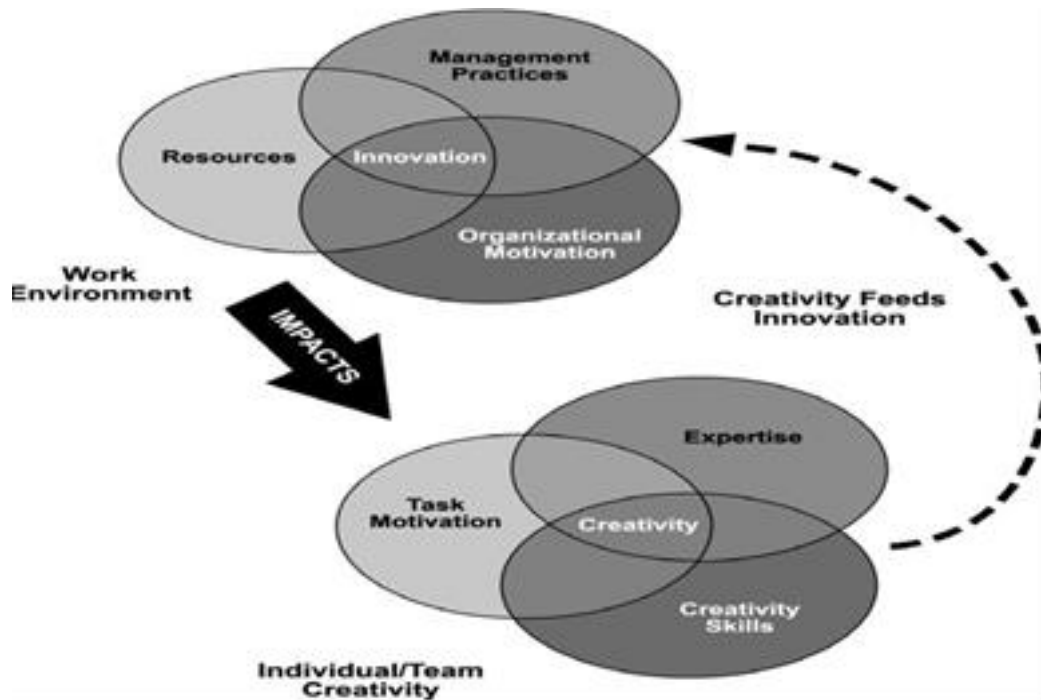


Figure 5.1: Componential Theory of Organisational Creativity

Source: Amabile, (1997: 53)

Explaining Figure 5.1 above, Amabile (2012) asserts that domain-relevant skills include expertise, intelligence, knowledge, technical skills, and talent within a specific domain where an employee is working, for instance, civil engineering. These skills consist of the raw materials that employees can build upon throughout the creative process thereby producing creative ideas. Creativity-relevant processes denote cognitive processes and personality characteristics that are conducive to autonomy, risk-taking, taking new ideas on how to solve problems and self-controlled work style (Piplani, 2018).

Cognitive processes involve thinking broadly with an ability to use a wide range of information and to making unconventional links between different classes of data. Personality traits are those which encourage individuals to be adventurous, to involve themselves in risk-taking

behaviour and to avoid conventionality to produce creative consequences (Amabile & Pratt, 2016). Intrinsic motivation is the last of the components within the theory. According to Piplani (2018), intrinsic motivation refers to the desire to perform a task to solve a problem mainly because it is satisfying, interesting or challenging. This desire is within the individual and is not controlled by extrinsic motivating factors such as rewards, incentives or evaluation. Amabile *et al.*, (2016) contend that intrinsic motivation is the central tenet of the componential theory. Amabile *et al.*, (2016) argue that employees are more creative mainly due to enjoyment, interest, satisfaction and challenging work rather than through extrinsic motivators. This is because employees who are driven by external goals such as competition or rewards are unlikely to be creative.

The CTC was further modified in 1998 to show the significance of affect and mood in creativity. Amabile (1998) contends that intrinsic motivation can affect creativity through affective and cognitive mechanisms. Intrinsic motivated employees are mainly concerned with the task at hand. They experiment with different ideas and are willing to take risks. They take unconventional ways to resolve problems and take new cognitive approaches. As a result, since these employees engage in such behaviour mainly because they enjoy it they are more likely to develop a positive affect or mood when they are doing their work. Conversely, extrinsically motivated employees are more worried about extrinsic things, for instance, rewards and praise hence they are not as deeply engaged in their work because they prefer using conventional and safer ways to problem-solve (Piplani, 2018). As a result, they may feel little or no positive affect or mood when doing their work as compared to employees who are motivated intrinsically.

The applicability of the CTC differs from one organisation to the other. This is mainly because working environments differ between organisations. Amabile (2012) contends that the work environments in organisations are likely to be distinctive. Such elements may include top management behaviour, team dynamics and so forth. As such, the creative processes within organisations differ. For instance, the way people find problems and solutions to problems is likely to be different from one organisation to the other. Band (2014) maintains that organisational creativity and innovation is improved or constrained by the creative environment. For instance, supportive and creative environments include organisational encouragement which includes risk-taking, support, elaboration of ideas, reward, evaluation and recognition of creative work (Amabile, 1988; Martins & Terblanche, 2003); Supervisory encouragement including a supervisor who acts as a role model to his subordinates, who values

individual employee contributions, sets appropriate goals and support and shows confidence in the workgroup (Amabile, 1988); freedom including permitting employees to have autonomy over their work (Amabile, 1988; Martins & Terblanche, 2003); and workgroup support consisting of people who have a shared commitment, who help each other and who are open to constructive criticism (Amabile, 1988; Woodman, 2008). It is from this background that provision by organisations of an environment that facilitates creativity and innovation that this research sought to find out if employee engagement and skills development in organisations facilitates employee innovation.

5.4.2 Limitations of the Componential Theory of Organisational Creativity

Like any other theory the Componential Theory of Organisational Creativity has its own shortcomings. According to Amabile (2012) one of the major limitations of the theory when applied in organisations is that it focuses on factors within an organisation to influence creativity while ignoring external factors. Creativity in organisations may be influenced by outside factors for instance changes in customer preferences and economic fluctuations. When customer preferences change, organisations are also expected to do the same in order to meet changes in customer preferences. The same can also be said for economic fluctuations.

5.4.3 Rational for using the CTC theory

The CTC was adopted because it has favourable managerial implications. According to Amabile (2012) many managers have used the techniques and tools established from the theory to induce creativity and innovation within their organisations. Furthermore, the social environment may be used stimulate creativity and innovation by providing a sense of positive challenge in the work; work teams that are collaborative, diversely skilled, and idea-focused; freedom in carrying out the work; supervisors who encourage the development of new ideas; and so on (Amabile, 2012). Also, the theory focusses on cognitive and personality traits significant for risk taking, independence and skills in idea generation.

5.5 Chapter summary

The current chapter discussed three theoretical perspectives which underpin this research. These include the SET, HCT and CTC. The chapter discussed the Social Exchange Theory first which is premised on the principle of reciprocity. The theory highlighted that social behaviour and relations are an outcome of an exchange process. The principle of reciprocity can be used to explain why employees become engaged in their jobs. The chapter highlighted that employees become engaged in their work because of the expected outcomes which in turn

propel them to display positive behaviour such as increased effort, commitment and propensity to innovative. The HCT which states an investment in employees will yield positive outcomes for the organisation was also discussed. Specifically, the theory reiterates that an investment in employee development and education will lead to increased skills and productive employees. This satisfies the assumption that employee development will influence innovation in employees. The CTC and innovation were discussed to explain employee innovation in the workplace. The theory highlights that there is a higher degree of employee creativity and innovation if the working environment permits employees to be innovative.

The following chapter shifts the focus of the study to a discussion of the research methodology employed in the study. In this chapter, the research paradigm, research design, population, sampling methods, measuring instruments and statistical techniques used to analyse data will be discussed.

CHAPTER SIX

RESEARCH METHODOLOGY

6.1 Chapter Introduction

The previous chapter discussed the theoretical perspectives underpinning this research. This chapter discuss the research design and methods that were adopted during the investigation process for this study. The chapter commence with an understanding of the term research. Thereafter, it examines the philosophical world views underpinning the study. Afterwards, the chapter inter alia discusses the research design and strategy, population, sampling, data-collection methods, and statistical techniques used to analyse data in the study. The chapter also explores the ethical considerations and limitations of the study before providing concluding remarks.

6.2 Philosophical Worldviews of the Study

Lincoln (2011) argues that a research paradigm/philosophy or worldview provides a set of views that guide a study. It guides and supports the roadmap used for a study and regroups the philosophical suppositions concerning ontology, axiology and epistemology of the researcher (Creswell, 2013). Similarly, Thornberg (2012) assert that for research to be meaningful investigators have to consider a research philosophy fitting their opinions about the research phenomena and nature of reality which they are investigating. In addition, Ryan (2018) states that research paradigms guide research methods and analysis. Therefore, it is critical for researchers to understand research paradigms such that they are able to prescribe the appropriate paradigm in the context of the research. The choice of research paradigm, data collection and analysis should complement philosophical assumptions. Depending on the nature of their studies researchers can make philosophical assumptions from ontology, epistemology and methodological perspectives.

According to Bryman (2008), ontology focuses on what one believes to be fact or the values an individual's holds about what is regarded as real. Ramey & Grubb (2009) relate ontology to the nature of social reality. It explains the kind of things that exist, the circumstances of their existence and the relationships between these factors (Blaikie, 2007). The ontological perspective of this study was premised on objectivism which holds that reality exists out there and we may come to know the truth about reality through recurring interpretations of it in highly

controlled situations. As such, the study pursued knowledge creation on the research variables through the interpretation of primary data collected.

According to Ryan (2018) epistemology is the viewpoint on how we may come to know the world. It focusses on how knowledge which justifies a study or theory is created (Carter & Little, 2007). From an epistemological perspective, acquiring knowledge is transactional. Thus, in this research, knowledge on fostering employee innovation through engagement and skills development was co-created between the research participants, the researcher, and secondary data. On the other hand, methodological assumptions entail the decisions behind the use of particular strategies, processes or a plan of action, and methods in research. In other words, these are methodological assumptions necessitating the decision-making process on the methods used in carrying out a study. In this study, the quantitative approach premised on the positivist research philosophy was adopted.

Ryan (2018) explains that for one to understand the concepts found in research philosophies, one has to understand the logic applied to the data to obtain results. From this context, one has to understand the reasoning behind the study results. There are two main types of reasoning in social science research namely: inductive and deductive reasoning. According to Bryman (2008) inductive reasoning involve observations, experiments, generalisations and determining patterns in data and then theory establishment to explain the results. This practice involves making constant observations and measurements up to when the investigator is assured that the results refer to the wider situation. Deductive reasoning is a reverse procedure that involves finding a theory, then making hypotheses or predictions based on the theory, then experimenting, observing or measuring to disapprove or to prove the acceptability of the theory. This research followed the deductive reasoning as it is premised on theoretical underpinnings whilst also using research questions (*See 1.5.2 & 1.5.3 above*) to predict the relationships between research variables.

6.2.1 Interpretivist research paradigm

Explaining interpretivism, Bryman (2017) notes that reality can be interpreted in many ways. The interpretations of the reality vary from the scientific knowledge that is being studied. Interpretivism research philosophy assumes that reality constantly changes and is known through indirect interpretations by individuals. According to Zukauskas, Vveinhardt & Andriukaitienė (2018) the social world can be construed in an unbiased manner; therefore, the greatest attention must be given to understanding ways people experience the social world.

Kivunja & Kuyini (2017) point out that interpretivism, as an approach, aims to understand and interpret what the subject is thinking. In this approach, an effort is made to gain an understanding of the subject's viewpoint rather than the viewpoint of the observer. In this regard, reality is socially constructed and hence this is referred to as the constructive paradigm (Bogdan & Biklen, 1997; Kivunja & Kuyini, 2017).

The interpretivist paradigm assumes a relativist ontology, subjectivist epistemology, balanced axiology, and naturalist methodology. From a relativist ontology people believe that the situation studied has multiple realities and therefore those realities can be looked at to find meaning or reconstructed through interactions between the research participants and the researcher (Chalmers, Manley & Wasserman 2005). With subjective epistemology, the researcher makes meaning of the data obtained through their interactions with the research subjects (Punch 2005). Kivunja & Kuyini, (2017) highlight that under subjectivist epistemology researchers and their study participants involve themselves in interactive processes in which they read, listen, record and write down research data. The assumption under naturalistic methodology is that whilst acting as a participant the researcher utilises information obtained through reflective sessions, interviews, discourses and text messages to make meaning and reality (Kivunja & Kuyini, 2017). The assumption under balanced axiology is that findings of the research will show the values of the researcher when producing a balanced report of the study findings. Tuli (2010) states that utilising the above approaches in interpretivism researchers have personal contact with study subjects and gain insider views, which lead to deeper understanding of the phenomenon being studied.

The interpretivist research paradigm is widely used in qualitative research. Creswell & Creswell, (2017) affirm that interpretivism informs qualitative research in that it is effective in understanding people and their actions through interactions. Qualitative research is exploratory in nature. Therefore, it encourages human interaction producing much richer meanings to interpretations (Bougie & Sekaran, 2016). Likewise, Stiles (2003) claims that interpretivism explains qualitative research because it allows a more intensive and flexible relationship with the research subjects to get in-depth knowledge concerning a research phenomenon. Pull & Carter (2018) note that researchers must select a research method which suits the study and produce the anticipated outcomes. If, for example a study aims to interpret certain human behaviour, social interactions, or obtain an in-depth understanding of people's lives, the interpretivist paradigm will be more suitable than other paradigms. This study did not adopt the interpretivist research paradigm because it did not rely on human interactions to find

meaning to a phenomenon rather through positivists who argue that the world and its properties need to be measured objectively instead of being inferred through subjective intuition.

6.2.2 The positivist research paradigm

The positivist research paradigm is an epistemological position mainly evidenced in quantitative research studies. The paradigm highlights that researcher's gain and advance knowledge through drawing information from a sample in the form of numerical data (O'Leary, 2017). Positivists argue that the world exists externally, therefore, its properties have to be measured accurately rather than concluded through biased intuition or replication and sensation (Smith, Sparkes, Phoenix & Kirkby, 2012). Furthermore, the philosophy assumes that people are natural objects which have existence and properties that exist independently of any observer.

This study follows the positivist research paradigm. The positivist approach is found within the objectivist epistemology which is a methodological belief in quantitative research. The positivist research paradigm highlights that researchers gain and advance knowledge through drawing information from a sample in the form of numerical data (O'Leary, 2017). Hammersley (2013) contends that the understanding of the research phenomenon, in reality, requires measurement and that it should be supported by evidence. As such, this paradigm allows studying aspects through determining the link between the independent variable(s) with one or more dependent variable(s) (Cohen, Manion & Marison, 2011). In this study inferences were made between employee engagement (independent variables), skill development (independent variables) and innovation (dependent variable) to understand the nature of the relationship between these variables. Furthermore, the positivist paradigm was adopted as it allowed an understanding of objects through sampling methods, measurement questionnaires and empirical tests. For this reason, insights provided by this paradigm were used to determine the sampling method, appropriate research instruments to accurately come up with findings that are in-line with likely research outcomes.

The positivist paradigm has its advantages. Insights offered by the paradigm are of high-quality reliability and validity standard; and can be generalised to a large population (Johnson, 2014). The argument by Johnson (2014) is consistent with studies that used the positivist approach such as the study presented by Dörnyei (2007) who argues that reliability is assessed using statistical analysis by determining the correlation or internal consistency between one or more variables, using Cronbach's alpha reliability coefficient. In this research, to maintain reliability

and validity, statistical tests such as Cronbach's alpha reliability coefficient and Factor analysis were performed. Also, the results obtained are generalised to every manufacturing company in Zimbabwe. The positivist approach allows researchers to develop an hypothesis using existing theories. Hypotheses can be confirmed either in part, entirely or rejected, leading to further improvement of tested theory for further research (Saunders, 2009). The results obtained in this study proved that the theoretical underpinnings used in this study purport to say what they say with regard to the variables of the study.

6.3 Research Design

According to Dennels (2018: 402) research design is

“a plan that provides the underlying structure to integrate all elements of a quantitative study so that the results are credible, free from bias, and maximally generalizable.”

It indicates a series of steps that researchers need to adopt from beginning to the end when carrying out their studies. Similarly, Kumar (2005) points out that the purpose of a research design is to have a working plan to take on the different actions needed to finish a study, and to make sure that these procedures are satisfactory in obtaining objective, accurate and valid answers to the research questions. Dannels (2010) points out that understanding research design is significant in a study as it indicates the underlying structure for the unification of all the components in a study and it helps to validate the research outcomes.

Creswell (2009) points out that the research design provides a roadmap that encompasses three things namely philosophical norms, plans for investigation and specific approaches used in data collection and analysis. Furthermore, the nature of the problem under investigation, the type of respondents and the researcher's personal experience influence the choice of research design adopted in a study. This view is shared by McCusker & Gunaydin (2015) who contend that a number of factors need to be looked at when selecting the research design. These include the aims or objectives of the study, the unit of analysis, the setting, the kind of research whether qualitative or quantitative and the amount of time required to collect data.

Creswell (2009) confirms that research design can take the qualitative, quantitative approach or mixed method research approach. The mixed method approach is mainly used to counter shortcomings of the qualitative or quantitative approaches. The section below discusses the qualitative and quantitative research approaches. Owing to its nature, this research adopted the quantitative research approach.

6.3.1 Qualitative Research Design

According to Bacon-Shone (2015) qualitative research is a methodological way of investigation that looks at a problem by creating a complex, rounded picture, analysis of words, reporting of detailed opinions from participants and by performing the study in a natural setting. Similarly, Burns & Burns (2008) contend that qualitative research is a research inquiry concerned with developing understanding of social phenomena which enables the researcher to collect and examine information taken through language and behavioural exhibits in a natural setting. Within the same context, Creswell, (2009) states that qualitative research involves investigating emerging questions using scientific methods and procedures. In qualitative research, data are normally collected in the informant's setting and are examined inductively, building from particulars to general themes, and with the researcher building rational interpretations that bring useful meaning to chaotic data.

6.3.2 Quantitative Research Design

This study was guided by the positivist worldview which favours quantitative data. Quantitative data confirm a research hypothesis or provide answers to research questions. Quantitative research design is a formal, impartial and logical process of finding information about the world. It is used to describe and explore the cause-and-effect relationships between research variables while testing them. These variables may be measured so that numerical data may be analysed using statistical procedures (Creswell, 2009). Leedy & Ormrod (2001) argue that quantitative research design enables researchers to find answers to questions on the association between research constructs with the aim being to explain, control and predict certain phenomena. Creswell (2014) adds that specific types of social research problems require specific approaches to find solutions to them. For instance, if the problem requires the determination of factors that result in an outcome, the usefulness of an intervention, knowing the best predictors of outcomes, and testing an explanation or a theory, then the quantitative research approach is the best approach to use. Quantitative research design was used in this study because it allowed the researcher to answer the research questions by determining if a relationship does or does not exist between employee engagement, skills development and employee innovation.

The quantitative research approach was adopted in this study for various reasons. Firstly, the approach was mainly useful for statistical data and was cost-effective and saved time (Daniel, De Stavola, & Vansteelandt, 2016). Researchers argue that using statistical data for research analysis and descriptions minimises the effort and time which the researcher invests when

explaining his or her result. The approach also allowed data to be calculated using statistical software for social science research such as Statistical Package for the Social Sciences (SPSS), South Texas Art Therapy Association (STATA), R amongst others which save a lot of energy, time and resources (Gorard, 2001; Connolly, 2007 & Daniel *et al.*, 2016).

Secondly, the approach used scientific techniques to gather data and to analyse these, which made the generalisation of findings possible. The interaction made with one group can be generalised and the interpretation of research findings need not be seen as a mere coincidence (Daniel *et al.*, 2016). For example, results of the present study can be reflective of different industries other than the manufacturing sector in terms of contents, samples and patterns. Thirdly, the approach ensured reliability of results. This is because the approach relies on testing hypotheses and research questions with the researcher not having to do intelligent guesswork but following clear guidelines to reach conclusions (Lichtman, 2013). Shank & Brown (2007) point out that the approach can be used in a public because of its clear guidelines and objectives. Thus, the study can be conducted at any other place or time but still produce the same results.

The approach was also used because it eliminates the researcher's bias. This is because the approach ensures the detachment of the researcher from the subjects. Litchman (2006); Creswell (2009) & Bryman (2012) argue that quantitative research eliminates bias because the researcher is not in direct contact with the subjects as he or she collects data through either the internet, a telephone or on pencil and paper questionnaires. The approach guarantees anonymity of the respondents and also full control in terms of explications, reporting, and conclusions. As a result, the impartiality of the research will be maintained and not compromised.

6.4 Target Population

The population of a study involves all the cases from which research findings can be generalised. It consists of the total population of people, events or things of interest with one or more common characteristic that the researcher seeks to investigate or draw the desired information from (Sekaran, 2006; Sekaran & Bougie, 2010; Mang'unyi, 2015). It is from an entire population that a sample for a study is drawn. Salkind (2012) explains that a target population consists of potential participants to a study where the researcher(s) seek to generalise the research findings. It is the sum of the components that have a chance of being selected in a given sample. Ghauri & Gronhaug (2010) assert that 'target groups' must be

specified prior to the beginning of an investigation. It is obligatory for the researcher to specify the target population based on judgment and logic indicative of the objectives of the study at hand (Sue & Ritter, 2012). In line with the objectives of this study, the target group comprised organisations in the manufacturing sector in Zimbabwe. Within the target group, research was conducted to determine organisations that were suitable for the study. A total of five organisations with a combined population 2550 were selected to make up the sample of the study.

6.5 Sampling Frame

A sampling frame depicts a list of all the elements in a given population. DiGaetano (2013) states that it is a frame that portrays every element of a population. The sampling frame in this study comprised five organisations in the manufacturing sector in Zimbabwe. A number of factors were considered to determine the organisations used for the study. For instance, the geographical location and type of manufacturing done by the organisation. To make the research manageable, this study concentrated on organisations in the Harare province. This was selected because it is the Capital city of Zimbabwe and is the hub of many manufacturing organisations. Also, the study varied the type of manufacturing done by the organisations. This was done to have a representative sample of the manufacturing sector organisations. The organisations ranged from food and beverages manufacturing, automotive, to construction.

6.5.1 The Sampling Strategy

Sampling enables researchers to obtain data from a given population using a portion of that population as it may not be practical to gather data covering each and every single member of the population (Saunders *et al.*, 2012). Likewise, Kumar (2011) states that sampling involves selecting a few from the larger group to become the basis for approximating the occurrence of an unknown piece of facts regarding the larger group. Researchers make a distinction between two sampling strategies namely probability sampling and non-probability. Probability sampling is adopted when the probability or chance of each item selected from a population is known and equal for all cases (Thomas, 2007).

According to Babbie & Mouton (2006) probability sampling is the optimum method of sampling because it seeks to select elements of a population in a way that descriptions of those elements precisely represent the parameters of the entire population from where the elements are drawn. Also, the strategy ensures that the selection of respondents is completely randomised and without bias. Thus, greater confidence may be placed in the representativeness of

probability samples (Babbie & Mouton, 2009). Probability sampling employs techniques like random, systematic, stratified, and cluster sampling. Nonetheless, non-probability sampling is not typically meant to obtain representative samples to generalize to the population (Bryman & Bell, 2011). When using non-probability sampling, researchers focus on the contribution of specific knowledge-holders to draw data used to answer the research questions and achievement of the research objectives. Non-probability methods include accidental, quota, snowball, purposive and convenience samples. For the reasons given above, this study employed probability sampling. In particular, stratified random sampling was used. Stratified random groups divide the sampling frame into relevant strata first and then systematic sampling or random sampling is employed to pick respondents from each stratum. Each organisation in this study was used as a different stratum and random sampling was conducted in each stratum to select respondents.

6.5.2 Sample Size

Desu & Raghuvarao, (2012) view sample size as the sum of elements used in the sample for the study. Similarly, Singh & Masuku (2014) regard sample size as the number of participants feasibly included in a statistical sample. Preceding researchers offer comparable and empirical standards which are used to base their judgments on. In research, sample sizes used by preceding researchers can be used to make decisions on the appropriate sample size for a study. To generate inferences, an appropriate sample size should be used in research. Faber & Fonseca (2014) state that a sample should not be too small or too big as the two might have limitations that may compromise conclusions concerning a study. Samples that are too small may inhibit results from being extrapolated at the same time a sample that is too big could proliferate the detection of differences. If determined correctly, an appropriate sample size reduces chances of inappropriate inferences and sampling bias. Ott & Longnecker, (2016) highlight that selecting a representative sample in quantitative research is essential in generalising the results of a given population.

The sample size of this study comprised 335 employees obtained from five manufacturing organisations used in this study. The sample size was determined using the generalised scientific guideline for sample size decisions by Sekaran (2003). According to Sekaran (2003) to determine the sample size the decision is premised on the level of precision and confidence when calculating the population parameters. Precision is a function of the range of variability in the sample mean while confidence reflecting the level of certainty with which population parameters can be estimated based on sample statistics. Nevertheless, for easier understanding,

Sekaran (2003) provided precalculated guidelines of sample sizes. This study adopted the precalculated sample sizes guidelines by Sekaran (2003) as shown in Table 6.1. In the table N represents the total population whilst S being the sample.

Table 6.1 Sample size calculation

N	S	N	S	N	S
30	28	280	162	1500	306
40	36	290	165	1600	310
50	44	300	169	1700	313
60	52	320	175	1800	317
70	59	340	181	1900	320
80	66	360	186	2000	322
90	73	400	196	2200	327
95	76	420	201	2400	331
100	80	440	205	2600	335
110	86	460	210	2800	338
120	92	480	214	3000	341
130	97	500	217	3500	346
140	103	550	226	4500	354
150	108	600	234	5000	357
160	113	650	242	6000	361
170	118	700	248	7000	364
180	123	750	254	8000	367
190	127	800	260	9000	368
200	132	850	265	10000	370
210	136	900	269	15000	375
220	140	950	274	20000	377
230	144	1000	278	30000	379
240	148	1100	285	40000	380
250	152	1200	291	50000	381
260	155	1300	297	75000	382
270	159	1400	302	1000000	384

Source: Sekaran, 2003: 294

Researchers have claimed that in quantitative studies the size of the sample sizes also determines the adoption of some of the statistical techniques used to analyse data (Saddiqui, 2013; Deng, Yang & Marcoulides 2018). For instance, Saddiqui, (2013) contends that for statistical techniques such as Structural Equation Modelling (SEM) the recommended sample size must be above 200. Likewise, Deng *et al.*, (2018) add that realistic results in SEM can be found if the sample size is larger than 200. The above reasoning makes the sample size 335 used in this study viable and adequate for SEM.

6.6 Questionnaire Development

A survey instrument in the form of a questionnaire was used as the data collection tool for this research. A questionnaire is a set of standardised questions in electronic or paper form used to draw information from respondents to make room for comparisons. A questionnaire was adopted because it allows gathering of large amounts of data inexpensively, it ensures anonymity of respondents, and it allows generalisability of findings (Zikmund, Babin, Carr & Griffin, 2010; Sekaran & Bougie, 2010). Preceding the development of the questionnaire a literature review was conducted to determine what sort of questions to include in the questionnaire. Zikmund *et al.*, (2010) explain that questionnaires should be carefully designed to ensure relevancy and accuracy of the information being sought. Thus, literature plays a significant role in informing what should and should not be included in a questionnaire.

The questionnaire used in this study commenced with an introductory statement articulating the focus of the study and instructions to respondents. The questionnaire consisted of four sections as shown in Appendix 1. Section A focused on demographic information of the respondents; Section B on employee engagement; Section C on skills development; and Section D on employee innovation. Questions in Sections B, C and D were adopted from three previously used questionnaires whose reliability and validity had already been tested. During the development of the questionnaire the researcher followed the design elements suggested by Babbie (2005) for an effective questionnaire which include: introductory remarks, basic instructions, an introduction to each section, logical flow of sections and question alignment in a neat, logical and consistent manner. The sub-sections below describe how questions were generated for each of the sections measuring the research constructs of the study (Section B, C and D).

6.6.1 Section B: Employee Engagement

Questions used in this section of the study were adopted from the UWES questionnaire. The UWES has been widely used in employee engagement surveys, as indicated in chapter two of this thesis. The scale measures the three dimensionality of employee engagement including dedication, vigour, and absorption, which contains 17 items weighted on a 5 point Likert scale stretching from 1 (strongly disagree) to 5 (strongly agree).

6.6.2 Section C: Skills Development

Skills development was measured on 25 item scale adapted from Naong, (2009). The items were measured on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly

agree). Sample questions from the questionnaire included: 'Are there any policies regarding training and development of employees in the organisation?' and 'Is training necessary to improve your work processes?'

6.6.3 Section D: Employee Innovation

The questions in this section were compiled from a questionnaire by Amabile (1996). The scale contains 24 items measured on a 5-point Likert scale ranging from 1 (Highly dissatisfied) to 5 (Highly satisfied). Sample items on the scale included: 'The environment I work in permits me to come up with new ideas;' and 'My boss encourages employees to try and solve problems in different ways.'

6.7 Pre- testing and refinement of the questionnaire

The development of a research questionnaire is an iterative process that involves a number of carefully planned stages. One of the important stages in the development of a questionnaire is pretesting or piloting. According to Hellen (2015) pretesting a survey instrument is a way of checking whether or not the questions contained in the instrument work as intended and are understood by those who are likely to use it or respond to it. Pretesting the questionnaire is performed before the actual data collection. Grimm (2010) states that pretesting a survey instrument is done to test the instrument and data collection processes before the actual collection commences with the objective being to verify whether or not the questions being asked accurately to reflect the information being sought and if the participants will be able to answer the questions. Also, pretesting the questionnaire exposes unclear, vague instructions and questions and helps to avoid the formulation of double-barreled questions that require more than two answers, meanings and several responses within a particular question. After the pilot study the researcher refined the instructions such that participants at every level in the organisations could understand what was required in completing the questionnaire.

According to Chaudhary & Israel (2017) there is no prescribed sample size for a pretest or pilot study. Various studies have suggested sample sizes adequate for pretesting. For example, 0-10 (Saunders *et al.*, 2007); 10-15 (Sheatsley, 1983); 0 -20 (Radhakrishna, 2007). Chaudhary & Israel (2017) argue that the decision about the adequate sample size for a pretest or pilot exercise rests upon the researcher and depends upon the time and budget available to conduct the pretest. Also, bigger sample sizes are commended to produce more robust and reliable results of the questionnaire. For this research, a total of 25 questionnaires were circulated for pretesting. Respondents were asked to indicate errors, vague questions, time taken to complete

each section of the questionnaire, and provide suggestions on how to improve the questionnaire. Pretesting the questionnaire was also done to determine the reliability and validity of the questionnaire. The sections below explain the reliability and validity of the questionnaire used in this study.

6.8 Reliability of the questionnaire

Tavakol (2011) states that determining the reliability of a measuring tool is an essential element in the evaluation of a measuring instrument. Reliability of a study instrument focus on determining the degree to which the instrument delivers consistent results (Creswell, 2015). It is concerned with assessing whether or not the research instrument measures consistently. Mugenda & Mugenda (2003) add that measuring reliability of a survey instrument ensures that it is error-free thus guaranteeing repeated measurement across time and under varying conditions. To establish the reliability of the measuring questionnaire used in this study, the Cronbach Alpha Coefficient test was performed. Sakaran (2006) highlights that the Cronbach Alpha Coefficient test shows the extent of cohesiveness among the items on the measuring scale so as to determine the reliability of the scale. Specifically, it checks the internal consistency of a scale or test. Tavakol (2011) points out that internal consistency shows the degree to which items in a test or scale measure the same construct or concept. Consequently, it is linked to the connectedness of the items within the scale or test. The Cronbach Alpha Coefficient is expressed numerically ranging between 0 and 1 (Tavkol, 2011). It is towards 0 if no variance is consistent and towards 1 if all variance is consistent (Brown, 2002). It therefore means that if the coefficient is closer to 1 the greater the correlation between the items in a scale. Researchers have agreed on the general acceptable levels of the Cronbach Alpha Coefficient (Nunnally, 1994; Bland & Altman, 1997; DeVillis 2003; George & Mallery, 2003; Hair *et al.*, 2010). They concurred that the general acceptable levels of the coefficient should be above .70. However, some went as far as to provide the general guidelines for interpreting coefficient results. For instance, Nunnally (2004) states that coefficient levels above .90 are excellent, .80 and .89 good; .70 to .79 adequate while below .70 may have questionable applicability. In the same grid, George & Mallery (2003) interpreted coefficient levels as follows: > .90 excellent; > .80 good; > .70 satisfactory; > .60 questionable; > .50 not good enough; and < .50 unacceptable.

The reliability of the measurement instrument used in this study was determined based on the research constructs making up the study: employee engagement, skills development and employee innovation. The reliability of the employee engagement was performed based on the

three variables making up the construct which are vigour, dedication and absorption. The table below shows a summary of the reliability coefficients of the measuring instrument during the pretest of the study.

Table 6.2: Summary of reliability coefficients during the pretest exercise of the survey instrument

Scale	Sample	Means	Average item-total correlation	Cronbach Alpha Before Deletion	Number of Items	Number of Items Deleted	Number of remaining Items	Revised Cronbach Alpha
Vigour	25	3.713	0.470	0.730	6	0	6	0.730
Dedication	25	3.776	0.737	0.886	5	0	5	0.886
Absorption	25	3.380	0.491	0.758	6	0	6	0.758
Skills Development	25	3.654	0.518	0.885	25	0	25	0.885
Employee Innovation	25	3.862	0.468	0.876	24	0	24	0.876

Source: SPSS v.26

Table 6.2 above shows the results obtained from the pilot study conducted on the questionnaire. The sample for the pilot study consisted of 25 respondents. From the results displayed above, the mean score shows the average response rate from the 25 participants involved. From all the scales used the average mean score was 3.677. The average mean score obtained specify that the participants of the study were to some extent agreeing to the demands of the questions that were being asked.

Table 6.1 also displays the Cronbach alpha values of each scale used in the pilot study before item deletion and after item deletion (vigour $\alpha=0.730$; dedication $\alpha=0.886$; absorption $\alpha=0.758$; skills development $\alpha=0.885$; employee innovation $\alpha=0.876$). As shown above, all the alpha values are above 0.7 thus there was no need to delete items in order to increase the alpha value of a scale. The obtained Cronbach Alpha values were consistent with the literature, which states that coefficient values of above 0.7 are acceptable as they indicate good stability and internal consistency (Hair *et al.*, 2010; Ghazali, 2016; Nunally, 1978 & Panayides, 2013).

6.9 Validity of the questionnaire

Validity of the measuring instrument refers to the degree to which a measuring scale measures what it intends to measure. Yin (2011) explains that validity is the extent to which a test or an instrument measures what it actually intends to measure. Validity, therefore, shows the degree to which the findings of a study illustrate the definite results of what was being tested in the study. Wallen (2003) concurs and claims that the quality of a study instrument is very significant because conclusions made in a study are obtained using the information drawn from the study instrument.

There are different forms of validity. These include content, face, and construct validity. According to Salkind (2010) content validity denotes the extent to which items in a test or measuring scale are fairly representative of the entire domain the test intends to measure. In other words, content validity focuses on the extent to which items in a measuring instrument are representative of the entire subject area being measured. Sekaran and Bougie (2010) argue that content validity ensures that the items in a measuring scale adequately represent the universe of the subject area or constructs under study. To ensure content validity in this study, the researcher conducted an in-depth literature review of the research constructs and made sure that the measuring scale items captured the fundamental aspects of the research constructs. Face validity refers to the aptness of a measuring test and its items as they look to the responded in a test (Holden, 2010). It is simply whether or not a test measures what it intends to measure at face value. In order to ensure face validity in this study, the measuring instrument was developed in close consultation with the researcher's supervisor to check the quality of the instrument in relation to the objectives of the study. The researcher pretested the research instrument and meaningful suggestions made during this process were adopted to refine the instrument. In addition, the University of KwaZulu Natal research and ethics committee also assessed the appropriateness of the measuring instrument.

Ginty (2013) submits that construct validity is the degree to which the measurements used, often questionnaires, really measure the theory or hypothesis they intend to measure. Construct validity is distinguished in two forms namely discriminant construct validity and convergent construct validity. Convergent construct validity measures the association between the construct and a similar measure. This is done to check whether constructs which are supposed to be connected are connected (Ginty, 2013). To determine convergent construct validity in this study, exploratory factor analysis was performed where acceptable levels were obtained by removing items that compromised the validity of the instrument. Hubley (2014)

posits that discriminant construct validity is denoted by proof that measures of a construct that supposedly should not be highly correlated are in fact, not found to be highly related to each other. For this study, the average variance extracted analysis was performed. Results for construct validity for this study are shown in the ensuing chapter.

6.10 Data Collection Procedure

According to Kabir (2016) data collection involves assembling information of interest in a proven systematic way that allows researchers to test hypotheses, answer specified research questions, and assess outcomes. This component of data collection is important in all fields of study whether humanities, physical, business or social sciences, and should be carefully managed. The objective for this process is to collect quality data which can be interpreted through data analysis that leads to the development of convincing and credible answers to the research questions or hypotheses of the study (Kabir, 2016).

Before to the commencement of data collection, the researcher obtained gatekeeper permission and a sample of the questionnaire to the organisations concerned asking for authorisation to conduct research appears in (Appendix A). The contents of the gatekeeper's letter were carefully crafted and approved by the researcher's supervisor. After permission to carry out research was granted, a questionnaire measuring employee engagement, skills development and employee innovation was distributed to participants in the form of pencil and paper, and electronically. The questionnaire contained an introductory section informing participants about the reasons for the research and that all the data obtained will be treated with confidentiality and solely used for academic purposes. Also, participants of the study did not have to write their names on the questionnaire or on the consent form because of how sensitive the study is. Pseudonyms only were used. A total of 59 questionnaires were returned in the form of pencil and paper responses while the rest were electronic responses (online responses). The high response rate in electronic questionnaires is attributed to the effects of the COVID 19 pandemic as most people were working from home due to the imposed national lockdown by the government encountered during the data collection period.

Prior to completing the electronic questionnaire, an email requesting consent to participate was sent to all the research subjects. After agreeing to participate in the study, a link with the web version of the questionnaire was then sent to the participants. The questionnaire provided participants with instructions on how to complete it. For example, it required participants to provide a single response per item and participants could only move to the next section after

completing all items. The data obtained from the electronic questionnaire were collected by the researcher in the form of a Microsoft Excel database. The database was used as input for the statistical programme used to analyse data for this study. The study used the Statistical Package for Social Sciences (SPSS) version 26 and STATA for analysing data. SPSS version 26 is a statistical software program that is used to make meaning from data collected through several tests contained in it.

6.11 Procedures for Data Analysis

The measuring instrument adopted in the study sought descriptive and inferential information. Data gathered in Section A of the instrument was analysed using descriptive statistics. The descriptive statistics used comprised simple percentages, frequency counts, standard deviations and mean counts. To expound on the descriptive statistics, the results obtained were shown in the form of tables and graphs.

Section B, C, D of the research instrument contained Likert Scale type of questions which are used to infer relationships between variables. Data collected under these sections were collected and coded in SPSS version 26. In order to answer the research questions, several inferential statistics tests were conducted. These tests included Factor Analysis, Multiple Regression Analysis, Structural Equation Modelling (SEM) and Correlation Analysis. To elaborate on the data analysis techniques employed in this study the following section discusses in detail the techniques used by the researcher.

6.11.1 Descriptive Statistics

Descriptive statistics describe or summarise data collected in a meaningful way. It is a statistical analysis method used to describe or summarise numerical data. Sekaran & Bougie (2010) add that descriptive statistical techniques are employed when examining demographic or categorical data with frequency distribution tables to show the number of occurrences and percentages of different sets of data in a study. Wilson (2010) contends that the main aim of descriptive statistics is to provide the reader with a summary of the data gathered prior to conducting a detailed analysis of the data. For this reason, many researchers opt to begin their data analysis with descriptive statistics. This study commenced its data analysis with descriptive statistics employed. Specifically, the study calculated is arithmetic mean and standard deviation.

Arithmetic mean was computed in this study. It is a measure of central tendency that determines the mean value by adding all the values in a data set divided by the number of observations in it. It is calculated manually using the following formula:

$$X = \frac{\sum x}{N}$$

Where X represents the mean, Σ represents the summation of all values whilst N is the number of observations.

A different descriptive statistics method employed in the study is Standard Deviation (SD). Standard deviation is a measure of dispersion which expresses the dispersion of data from the mean (Barde & Barde, 2012). Standard deviation is a good measure of dispersion which provides a good mental picture when describing a sample (Andrade, 2020). It is used to explain how far from the mean the average person is. Thus, if the SD is large then the widely spread or scattered values are around the mean. On the other hand, if SD is small, the scatter is also small. In this regard, the mean indicates what the average value is whereas SD indicates the average scatter of values (Andrade, 2020).

6.11.2 Inferential Statistics

Wisniewski & Picone (2019) highlight that inferential statistics is a data analysis method which makes interpretations about a set of data, specifically to determine the likelihood that a conclusion about a sample is true. The method is used to understand, make estimates, predictions and conclusions regarding a population from which a sample is obtained (Bhandari, 2020). Simply put, inferential statistics is used to draw inferences on a given population sample. The section below discusses the inferential techniques used in this study.

6.11.2.1 Factor Analysis

Factor analysis is a statistical method that discloses patterns among variables and then groups highly interconnected variables into factors (Krabbe, 2017). It is a technique used to remove variable items that are not related with others or do not load any factor. According to Schulze, Hilger & Engelberg (2015) researchers use factor analysis with different goals in mind. Depending on the goals of a study, researchers may use exploratory or confirmatory factors analysis.

6.11.2.1.1 Exploratory Factor Analysis

Phakiti (2018) notes that exploratory factor analysis (EFA) is a multivariate method used in statistical analysis to determine factors that elucidate variations in participant's responses in measuring instruments such as Likert scale questionnaires. Hair *et al.*, (2006) add that the technique is used to condense data obtained in several variables into smaller number of factors to maximise the validity of a measuring instrument. Thus, the technique is largely applied to ascertain the factor structure of a measure and to determine its internal reliability. Fletcher (2007) provided three basic reasons for the use of EFA. The technique is used in data reduction when interrelations amongst data variables are not specified beforehand; its ability to determine a general factor; and its usefulness in test or scale development because it permits researchers to detect cross-loadings and to determine the dimensionality of a test.

To determine the tolerable factor loadings, Hair *et al.*, (2010) propose that factors should have a loading of $> .30$ to be accepted. In case of a two-factor or more structure, items are examined for probable cross-loadings. Thus, in a two factor or more structure items could be removed to make way for a simple structure. Researchers have also agreed on the steps that should be followed when conducting EFA (Kerlinger & Lee, 2000; Field, 2005; Hair *et al.*, 2010; Samuel, 2017). These steps include: deciding on the technique to be used when extracting factors; finding the suitable technique of rotating the factors; establishing the number factors to be removed; and identifying how factor scores will be calculated should they be of significance.

6.11.2.1.2 Deciding on the number of factors to be extracted

Pallant (2013) argues that there are two important issues to be taken into consideration when determining whether a set of data can be factor analysed or not. These include the sample size and the strength of the bond between variables. For this study, the Kaiser-Meyer-Olkin (KMO) test of sampling adequacy and the Bartlett's test of sphericity were used to determine the adequacy of the sample size and test the presence of relationships among variables. The KMO measure of sampling adequacy ranges between 0 and 1. Pallant (2013) points out that the value of KMO should be above 0.6. Hair *et al.*, (2010) claim that a KMO value nearer to 1 shows that patterns of correlations are comparatively compact hence factor analysis ought to present reliable and distinct factors.

According to Pallant (2013) the strength of correlations among variables is determined using the Bartlett Test of Sphericity. Hair *et al.*, (2010) claim that the test examines associations among variables and measures whether or not significant inter-correlations exists collectively.

Pallant (2013) indicates that a significant value lower than 0.05 shows that the data set does not produce an identity matrix and is thus acceptable for further analysis.

The present study employed the Principal Component Analysis (PCA) method of extracting factors. This method was used because it reduces the many factors into manageable sets with strong associations and also permits understanding of variable structures (Hair *et al.*, 2010). Jolliffe & Cadima (2016) concur that PCA is a procedure used in reducing the dimensionality of large datasets to enhance understanding and to limit information loss. The key output obtained in PCA are eigenvalues which are variances of the principle components. The general principle of factor extraction based on the eigenvalue is that factors with an eigenvalue of greater than 1 are retained (Fletcher, 2007). This is because factors or components with an eigenvalue below 1 show less variance than did the original variable which had a variance of 1.

6.11.3 Correlation Analysis (Pearson Product Moment Correlation Method)

The present study utilised the correlation analysis to determine relationships between the study variables. Franzese & Luliano (2019) described correlation analysis as a statistical process done to assess the strength of association concerning two quantitative variables. Specifically, this study employed the Pearson product moment correlation (PPMC) method to explore the nature of the relationships between variables. The PPMC is a bivariate method which measures the direction and strength of linear associations between research variables. The correlation coefficient symbolised by the letter r shows the strength of association between variables (Akoglu, 2018). The coefficient ranges between -1 and +1, with zero indicating no relationship between variables whereas 1 indicating a complete relationship. Akoglu (2018) adds that an inverse relationship is denoted by a negative (r) with the strength of the correlation increasing from 0 to 1 or from 0 to -1.

While relationships between variables may be statistically significant, it is of great importance to have a guide on when interpreting the correlation coefficient to avoid misunderstandings. Dancey & Reidy (2007) provide a useful reference on how to interpret correlations between variables when using the PPMC. The present study adopted the interpretation by Dancey & Reidy (2007) as indicated in the table below.

Table 6.3 Interpretation of Correlation Coefficient Value (r)

Correlation Coefficient Value (r)		Interpretation
+1	-1	Perfect
+0.9	-0.9	Strong
+0.8	-0.8	Strong
+0.7	-0.7	Strong
+0.6	-0.6	Moderate
+0.5	-0.5	Moderate
+0.4	-0.4	Moderate
+0.3	-0.3	Weak
+0.2	-0.2	Weak
+0.1	-0.1	Weak
0	0	Zero

Source Dancey & Reidy (2007: 1)

Table 6.3 reinforces the discussion above on the interpretation of the correlation coefficient value (r). For example, from the table coefficients ranging between +1 and -1 depict a perfect relationship between the variables tested. Coefficients ranging from +0.6 and -0.6 show a moderate relationship while +0.1 and -0.1 shows a weak relationship.

6.11.4 Multiple Regression Analysis

Regression analysis is a statistical way of approximating the relationship between variables which have reason and result relations. In other words, it is an analysis conducted to test the correlations between two or more variables having a cause and effect relationship (Uyanik & Guller, 2013). Regression analysis with one dependent variable and two or more independent variables is referred to as multiple regression. Sekaran & Bougie (2009) describe multiple regression as an inferential statistical technique done to test the degree of correlation on a dependent variable and a set of independent variables. For this research, multiple regression analysis was utilised to test the interplay between employee engagement, skills development, which are the independent variables and employee innovation, which is the dependent variable. Furthermore, the multiple regression technique was adopted in this study because it satisfies the reasons for using multiple regression by Leech, Gliner, Morgan & Harmon (2003). Firstly, the study consisted of research questions that combined independent variables to predict the dependent variable. Secondly, the measurement scale used in the study satisfied the use of multiple regression analysis because it uses an interval scale. An interval scale allows appropriate distinctions of participant's opinions. Thirdly, multiple regression analysis supports multi-collinearity measurement, which detects the existence of correlations between independent variables and whether or not this poses a threat towards the predication of the

dependent variable. Fourthly, multiple regression analysis indicates the total variance explained by the model. Total variance explained shows the extent to which the independent variables explain the dependent variable. Thus, it indicates the effectiveness of the resulting model. The ensuing chapter shows the multiple regression tests conducted in this research to calculate the impact of the independent variables on the dependent variable.

6.11.5 Structural Equation Modelling (SEM)

Schumacker & Lomax (2010) SEM is a statistical technique that employs various forms of models to test relationships between different constructs or variables. Structural Equation Modelling is a technique mostly used to test models that contain intervening variables, that contain multiple items and that are path analytic (Treiblmaier & Filzmoser, 2011; Bagozzi & Yi, 2012; Katou & Budhwar, 2010; Byrne, 2013). There are two main explanations for using SEM in the present study. Firstly, to test the theoretical model that is hypothesised in the study. Secondly, to test structural relations between the measured and latent variables (Prajogo & McDermott, 2011). Latent variables are the unobserved variables whilst the measured variables are the observed variables. In this study, the utilised variables in the measured model included employee engagement, skills development and employee innovation.

The application of SEM was done in two phases. The first phase included the determination of the psychometric properties of the measurement scales using Confirmatory Factor Analysis (CFA). Brown & Moore (2012) suggest that CFA is that part of SEM concerning determining the accuracy of the measurement scales by testing the relationships between observed indicators and latent variables. This relationship is referred to as the measurement model. The second stage involved the testing of the hypotheses through a technique known as path analysis. Path Analysis is conducted using the STATA. Schumacker & Lomax (2010) argue that path analysis is the most relevant model in substantiating theory when evaluating relationships. According to Bryne (2013) in SEM measured variables are represented by boxes while latent variables are shown through circles. The findings of the SEM tests conducted on the research variables of this study are shown diagrammatically in the chapter to follow.

6.12 Ethical Considerations

Several ethical issues are encountered by researchers during the course of a research project.

Hammersley (2015) states that ethics are a set of values suggesting human actions that are morally right. Kumar & Rai (2019) point out that all the players in a research project should adhere to ethical issues when formulating a research document. These players include the

researcher, participants and the sponsoring organisation. For this study, the researcher made sure that the identity of the participants to the study and their respective organisations were protected. This was achieved by not making the participants disclose such information on the questionnaire. Maintaining anonymity during research reduced prejudice from the participants (Surmiak, 2018). The data collected by the researcher from the participants were treated with utmost confidentiality. The researcher made sure the information collected was kept under lock and key in a cabinet at the office to make sure that no information was leaked to the public. Creswell (2014) advances that irrespective of the type of research whether quantitative or qualitative, ethical issues must be strictly adhered to in order to avoid challenges during the research process. Prior to commencement of the study, participants were advised of their right not to participate or to withdraw from the research process at any time without any consequence should they feel that their rights were being infringed upon. However, there were also informed that they could not withdraw once the questionnaires were submitted.

In addition, the researcher adhered to the ethical considerations relating to research conduct as defined by the UKZN research policy. The UKZN Research Ethics Policy applies to all students both graduates and undergraduates, and staff members involved in any research on or off the campuses of the UKZN. The policy articulates that each member of the institution's community is responsible for abiding by this policy in relation to academic work with which she or he is associated, avoiding any activity which might be considered to be in violation of this policy. Before embarking on data collection, the researcher sought institutional approval by making a formal application to the university ethics and research committee. Approval for the ethical application made by the researcher was obtained on the 10th of November 2020 under protocol reference number: HSSREC/00002099/2020 (Appendix B). According to Bryman & Bell (2011) institutions require researchers to apply for ethical approval to protect the researcher, participants to the study and the university from unethical ways during the research process and from any possible lawsuits.

6.13 Chapter Summary

This chapter looked at the methodology used for this study. In the chapter, the philosophical world view guiding the study was discussed. Specifically, positivism was discussed. The measuring instrument adopted, and its psychometric properties was also discussed. Deliberations on the measuring instrument also emphasised item analysis and EFA to determine factor structures linked to the measured constructs. The chapter also focused on the techniques conducted for data analysis. The techniques used included multiple regression

analysis and SEM and Pearson correlation test. SEM was used to evaluate the theoretical model describing the association between the measured variables.

The preceding chapter presented and analysed the results of the study. This chapter provided a detailed presentation and analysis of both descriptive and inferential statistics to answer and test the research questions and hypothesis proposed in the study.

CHAPTER SEVEN

PRESENTATION, INTERPRETATION AND DISCUSSION OF RESULTS

7.1 Chapter Introduction

The preceding chapter deliberated on the research methodology adopted in this study. A sample of 335 respondents was selected and a 1-5 Likert scale was used to examine the influence of employee engagement and skills development on employee innovation in Zimbabwe's manufacturing sector organisations.

The current chapter provides a comprehensive presentation and analysis of the results obtained in the study. The chapter made use of quantitative statistical techniques to present and analyse the data using SPSS and STATA. Sekeran (2006) notes that when reporting results of a study it is important to have good descriptions and logical explanations lucidly flowing from the outcomes of data analysis. In presenting and analysing data, the following structure stated below was adopted by the study:

- A description of the response rate and demographic findings obtained in the study. The analysis of these findings was conducted using frequencies, percentages and means. The analysis of these findings provided a clear overview and understanding of the research subjects who took part in the study.
- Presentation and discussion of reliability statistics and EFA performed on the research constructs.
- A discussion of the relationships on the study variables and tests conducted to confirm the hypothesis and research questions used in the study.

The above-mentioned discussions are followed by statistical analysis using regression analysis to determine the impact of the independent (employee engagement and skills development) towards the dependent variable (employee innovation).

7.2 Response rate

A total of 325 questionnaires were dispersed for this study. Of the distributed questionnaires 200 were returned. To determine the response rate for a study the sum of returned questionnaires is divided by the total number of questionnaires distributed. The obtained value is usually expressed as a percentage. Fincham (2008) states that the goal for any research should be to achieve a response rate of above 60%. In some cases, in quantitative research the

achieved response rate determines also the statistical techniques employed during data analysis. For example, statistical techniques such as the SEM used in this research requires a high response rate of above 200 participants in order to obtain meaningful results (Kline, 2012). However, Taherdoost (2016) argues that it is difficult to achieve a 100% response rate and this is mainly because respondents might refuse to respond to the research questions, might be ineligible to respond or might not be able to respond to the survey questions. Table 7.1 indicate the response rate for this study:

Table 7.1: Response rate

Description	Number	Percentage
Total number of questionnaires distributed	325	100
Total number of questionnaires returned	200	61.5
Total number of questionnaires not suitable /or returned	125	38.5

Table 7.1 displays the response rate of the study. Of the 325 questionnaires circulated only 200 of them were returned thus giving a response rate of 61.5%. As indicated in Table 7.1, 125 questionnaires were not returned thus giving a non-response rate of 38.5%. The response rate for this study therefore falls within the acceptable range as noted by Finchman (2008). According to Saunders & Townsend (2016) if the response rate is within the acceptable range it is considered reasonable and representative of the sample and it is possible to generalise the findings.

7.3 Demographic findings

Demographic findings from this study are presented in this section. Among the demographic variables presented is gender, marital status, age, educational qualifications, tenure and position in the organisation. Table 7.2 shows a summary of the demographic findings.

Table 7.2: Demographic findings

Variable	Variable label	Frequency	Valid percentage (%)
Gender	Male	90	45
	Female	110	55
Age	20-30yrs	47	23.5
	31-40yrs	110	55.0
	41-50yrs	37	18.5
	51-60yrs	6	3.0
Marital Status	Single	55	27.5
	Married	140	70
	Divorced	2	1.0
	Widowed	3	1.5
Educational Qualifications	High School	4	2.0
	Certificate	8	4.0
	Diploma	34	17.0
	Degree	105	52.5
	Other	49	24.5
Tenure	1-5yrs	85	42.5
	6-10yrs	49	24.5
	11-15yrs	44	22.0
	16-20yrs	15	7.5
	21+ yrs	7	3.5
Position in the organisation	Operational level	59	29.5
	Lower Management	58	29
	Middle Management	58	29
	Senior Management	25	12.5

Source: SPSS v.26 results

Table 7.2 shows the frequency distribution of the study demographic profile. Frequency distribution shows a summary of all distinctive values in particular variables and their rate of occurrence (Manikandan, 2011). In other words, it shows how frequencies are distributed over values.

The gender distribution of the respondents consisted of 90 males (45%) and 110 females (55%). The results show that the larger number of the overall sample were females. In terms of the age, the age group 31 to 40 years old had more participants with 55% followed by the age group 20 to 30 years old with a total of 23.5%. The age group 41 to 50 years old had 18.5% whilst the age group 51 to 60 years had only 3%.

Marital status was classified under single, married, divorced and widowed. The majority of the participants were married with a total of 70%. This was followed by single with 27.5%. Divorced with 1.0% followed by widowed participants with 1.5%. Also, amongst the demographic findings is educational qualifications. Under this category of demographic findings, the majority of participants had postgraduate qualifications with 52.5%.

Undergraduate degree holders with 24.5% followed by diploma holders with 17%. Certificate holders with 4% whilst those with high school qualifications with 2%. The obtained results indicate that manufacturing organisations in Zimbabwe are composed of highly educated people as shown by the percentage of a number of participants with postgraduate qualifications and undergraduate degree holders.

From the findings it can be noticed that most of the participants in the study had been with their organisations for less than 5 years 42.5%. This was followed by those with 6 to 10 years with a percentage of 24.5%. Those with 11 to 15 years with their organisations representing 22% whereas those with 16 to 20 years represented 7.5%. Those with 21 years and above represented 3.5%. Regarding the level or position in the organisation, the findings indicate that many of the respondents for the study were operational level staff at 29.5%. This is followed by lower-level management and middle level management who both represented 29% each. Senior level management had the lowest number of participants representing a total of 12.5%.

7.4 Internal reliability of instruments

To determine the reliability of the questionnaire the Cronbach alpha coefficient test was performed using the SPSS version 25. Different researchers have recommended an alpha value of 0.5 as the cut-off point, even though lower alpha coefficients could be regarded as suitable basing on the purpose of the research (Hair *et al.*, 2007). Reliability, internal reliability, inter-observer consistency and stability are significant in determining the alpha values. Using the empirical findings from Hair, *et al.*, (2007), this study accepts an alpha coefficient value equal to or greater than 0.7 ($\alpha \geq 0.7$) as indicative of good reliability.

Table 7.3: Reliability Statistics

Dimension	Cronbach's Alpha	Items
Vigor	.775	6
Dedication	.771	5
Absorption	.712	6
Skills Development	.882	25
Employee Innovation	.895	24
Overall	.933	66

Source: SPSS v.26 results

The results obtained from the reliability tests performed indicate alpha coefficients (α) greater than 0.7 ($\alpha \geq 0.7$) for the five variables in the study: vigor, dedication, absorption, skills

development, and employee innovation. This therefore highlights the fact that all items were good to be retained for further analysis.

7.5 Factor analysis

Factor analysis was employed to extract dimensional items from the research instrument. EFA permits researchers to condense and summarise data from a range of variables into a distinct set of dimensions that can be used to come up with informed decisions. Data reduction was performed in this study to determine significant variables in a large set. Factor analysis was then done to reduce the number variable items that were used in regression analysis.

7.5.1 Employee Vigour

In the current study, participants' views on their level of agreement or disagreement with the six pre-established factors of employee vigour were examined to indicate whether these factors could explain vigour in measuring employee engagement influencing employee innovation or not. The extent to which the participants agreed or disagreed with the statements in the questionnaire measuring employee vigour was determined using the Likert scale ranging from one to five given as (1-Strongly disagree; 2-disagree; 3-neutral; 4 agree; 5-strongly agree). To be precise, the mean and standard deviation of each employee's vigour item was calculated with results tabulated as shown in Table 7.4.

A mean score of above 3 indicated that the participants agreed with the items being measured. In contrast, a mean score of less than 3 showed that the participants disagreed with the relevant employee vigour items used as part of employee engagement. Standard deviation gave an indication of the general level of spread of the actual ratings from the mean of each dimension.

Table 7.4: Descriptive statistics for Employee Vigour

ITEM	N	Mean	Std. Deviation
6. At my work I always persevere, even when things do not go well.	200	4.09	.735
5. At my job, I am very resilient, mentally.	200	3.89	.778
4. At my job, I feel strong and vigorous.	200	3.76	.854
2. I can continue working for very long periods at a time	200	3.72	.989
3. When I get up in the morning, I feel like going to work	200	3.68	.890
1. At my work I feel like bursting with energy	200	3.56	.928

Valid N (listwise)	200		
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Source: SPSS v.26

Using the mean to rank employee vigour factors that could be used to examine the influence of employee engagement, the results show that all five factors were preferred as indicated by mean scores and standard deviations: At my work I always persevere, even when things do not go well. (mean = 4.09, standard deviation = 0.735), At my job, I am very resilient, mentally (mean = 3.89, standard deviation = 0.778), At my job, I feel strong and vigorous (mean = 3.76, standard deviation = 0.854), I can continue working for very long periods at a time (mean = 3.72, standard deviation = 0.989), When I get up in the morning, I feel like going to work (mean = 3.68, standard deviation = 0.890) and At my work I feel like bursting with energy (mean = 3.56, standard deviation = 0.928).

Descriptive statistics were used to provide a general overview of the findings. The Categorical Critical Component Analysis was performed to methodically reduce employee vigour items into major dimensions. Categorical Critical Component Analysis is a form of factor analysis developed for mixed measurement data such that numeric, ordinal or nominal numeric data that may not have linear relationships with each other (Kemalbay & Korkmazoglu, 2014).

The KMO test was performed to determine the sampling adequacy. Kaiser (1974) recommends 0.5 as the acceptable value. Table 7.5 shows that the KMO measure results for employee vigour indicated a sampling adequacy of 0.786, a value above the recommended 0.5, thus making the data appropriate for undertaking the Factor Analysis model.

Table 7.5: KMO and Bartlett's Test - Vigour

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.786
Bartlett's Test of Sphericity	Approx. Chi-Square	303.124
	Df	15
	Sig.	.000

Source: Primary data

Bartlett's Test provides an indication of the strength of the relationship amongst variables. It measures the null hypothesis that the correlation matrix is an identity matrix. Table 7.5 shows significant Bartlett's Test of Sphericity results ($\chi^2(15) = 303.124$, $p < 0.001$). Since p -value = .000 it is lower than 0.05. The significance level is small enough to allow for the rejection of the null hypothesis.

The results presented above suggested the need for data reduction techniques to determine the employee engagement and skills development constructs that could influence employee innovation in Zimbabwe's manufacturing sector organisations. Principal Component Analysis was done to reduce employee vigour elements. Specifically, Principal Component Analysis with an extraction method and varimax rotation with Kaiser normalisation was used to extract the employee vigour elements. To extract the vigour elements only those components with with eigenvalues greater than the Keiser' default of 1 were extracted.

Table 7.6: Principal components extracted – Employee Vigour

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.848	47.464	47.464	2.848	47.464	47.464
2	.986	16.434	63.898			
3	.763	12.711	76.608			
4	.559	9.312	85.921			
5	.436	7.261	93.181			
6	.409	6.819	100.000			
Extraction Method: Principal Component Analysis.						

Source: SPSS v.26

Table 7.6 shows that one component was extracted after meeting the set condition. The findings from Table 7.6 indicate that before rotation, component 1, had an initial eigen value of 2.848, and accounted for 47.464% of the variance amongst the elements respectively. The rotation sum of the squared loadings indicated that the eigen value and variances for component did not

change. Therefore, the findings confirmed that the varimax rotation that converged after five simulations insignificantly enhanced the data reduction process since after rotation exercise both eigenvalues and percentage variance was explained by the components that did not change. Figure 7.1 provides the analysis in the form of a scree plot diagram.

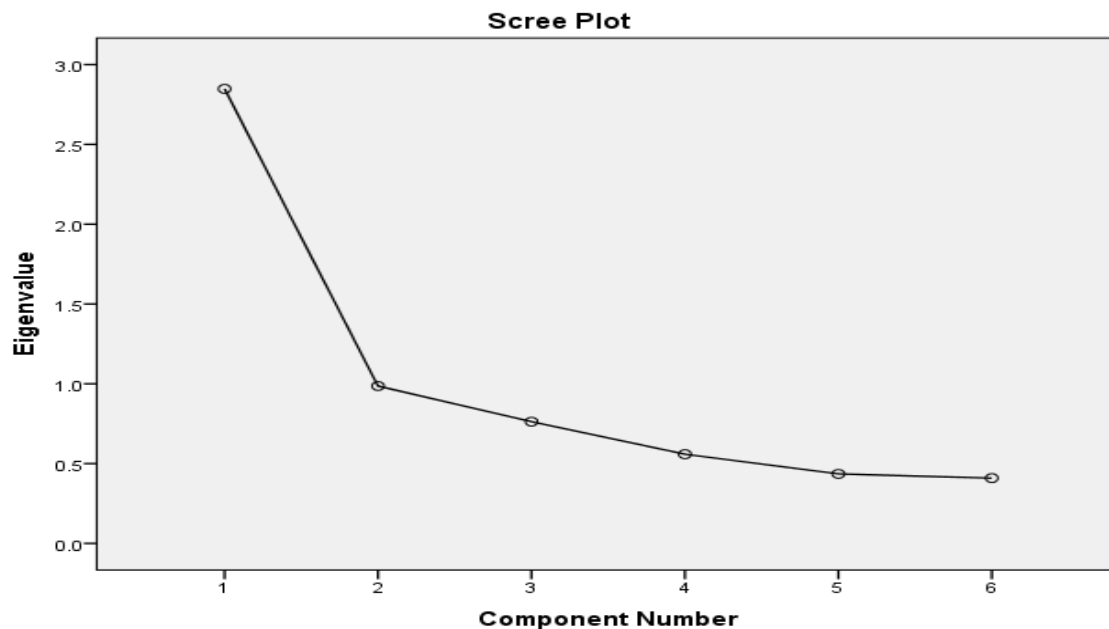


Figure 7.1: Scree plot – Vigour

Source: SPSS v.26

Figure 7.1 shows that, of the 6 components, only 1 had an eigenvalue greater than 1. The rest of the components had less than 1 eigen value of the preset Kaiser. To comprehend the employee vigour principal elements signified by one component, factor loadings of each item were explained using the rotated component matrix shown in Table 7.7

Table 7.7: Rotated Component Matrix- Employee Vigour

Component Matrix^a	
	Component
	1
1. At my work I feel like bursting with energy	.799
2. I can continue working for very long periods at a time	.644
3. When I get up in the morning, I feel like going to work	.733
4. At my job, I feel strong and vigorous.	.764
5. At my job, I am very resilient, mentally.	.632
6. At my work I always persevere, even when things do not go well.	.522
Extraction Method: Principal Component Analysis.	
a. 1 components extracted.	

Source: SPSS v.26

Results in Table 7.7 show that in Zimbabwe manufacturing sector, workers feel like bursting with energy (factor loading = 0.799), workers vow to continue working for very long periods at a time (factor loading = 0.644), workers get up in the morning and feel like going to work (factor loading = 0.733), workers feel strong and vigorous (factor loading = 0.764), workers were very mentally resilient at work (factor loading = 0.632) and workers always persevere, even when things do not go well (factor loading = 0.522) loaded heavily on principal component 1. A close analysis of these factors indicates that if pronounced collectively they relate to Zimbabwean manufacturing workers feeling strong and vigorous.

From the factor analysis the principal components extracted explaining the influence of employee engagement and skills development on employee innovation were highlighted in rank order for easier prioritisation of the elements. Table 7.8 shows a summary of the contributions of the three major reforms that were inferred from the categorical critical principal component factor analysis.

Table 7.8: Total Variance explained – Employee Vigour

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
Workers are feeling strong and vigorous	2.848	47.464	47.464

Source: SPSS v.26

From general themes emerging from the component, it was inferred that the major vigour elements that could be used to investigate the influence of employee engagement was that

workers are feeling strong and vigorous with an eigenvalue of 2.848 and accounting for 47.464 per cent in variation in factors.

7.5.2 Employee dedication

Employee dedication influencing employee innovation is another key outcome for this study. To accomplish this proposition participants to the study were asked to show their degree of agreeing and disagreeing with five predefined employee dedication elements used in measuring employee engagement against this, study respondents were asked to indicate their degree of agreeing or disagreeing to a set of five predefined dedication elements which were used to investigate the influence of employee engagement on employee innovation.

Descriptive statistics were performed to put data from the large number of respondents into simple statistics. Descriptive statistics transforms data from a sample into basic characteristics through measures of central tendency, distribution, and variability. Descriptive statistics have been used to sum-up responses from a large number of respondents into a few simple statistics. Table 7.9 shows the descriptive statistics of the employee dedication dimensions measured on a five-point Likert scale ranging from (1-Strongly disagree; 2 -disagree; 3-neutral; 4 agree; 5-strongly agree).

Table 7.9: Descriptive statistics for employee dedication

	N	Mean	Std. Deviation
1. I am proud of the work that I do	200	4.21	.954
5. I find the work that I do full of meaning and purpose.	200	4.14	.868
3. I am enthusiastic about my job.	200	4.02	.830
4. My job inspires me	200	3.96	.971
2. To me, my job is challenging.	200	3.51	1.173
Valid N (listwise)	200		

Source: SPSS v.26

Considering the top three elements of employee dedication, the results showed that respondents agreed that the Zimbabwean workers in the manufacturing sector are proud of the work they do (mean score 4.21, standard deviation = 0.954). Workers understand the full meaning and purpose of the work they do (mean score 4.14, standard deviation = 0.868) and that workers are enthusiastic about their job (mean score 4.02, standard deviation = 0.830). It can be concluded that even though there is less attention to employee dedication, it is important for

firms in the manufacturing sector in Zimbabwe to consider employee dedication as an important determinant in employee innovation.

The research used the KMO method to test the sampling adequacy. With KMO the lower the value, the more suited the data is for Factor Analysis. Table 7.10 shows a result of 0.816 KMO sampling adequacy. The result was above the acceptable value of 0.5 meaning that the data was suitable for a Factor Analysis model.

Table 7.10: KMO and Bartlett's Test – Employee Dedication

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.816
Bartlett's Test of Sphericity	Approx. Chi-Square	383.621
	Df	10
	Sig.	.000

Source: SPSS v.26

Bartlett's Test provides an indication of the strength of the connection among variables. It measures the null hypothesis that the correlation matrix is an identity matrix. Table 7.10 indicated that the Bartlett's Test of Sphericity is significant ($\chi^2(10) = 383.621$, $p < 0.001$) as it is lower than 0.05. Thus, the significance level is sufficient to permit the rejection of the null hypothesis. The significant results therefore mean that the degree of correlation among the employee dedication variable is adequately high to allow the use of Factor Analysis.

The Principal Component Factor analysis extraction method was adopted as shown in Table 7.11. There were five items under the employee dedication variable. The SPSS software was used to perform the factor analysis. The analysis used the default settings of maintaining components whose eigenvalue was above Kaiser (greater than 1).

Table 7.11: Principal Component Analysis – Employee Dedication

Component	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.891	57.811	57.811	2.891	57.811	57.811
2	.928	18.567	76.379			
3	.573	11.463	87.842			
4	.314	6.272	94.114			
5	.294	5.886	100.000			
Extraction Method: Principal Component Analysis.						

Source: SPSS v.26

Table 7.11 illustrates that only one component was extracted after satisfying the predetermined settings in SPSS. The results highlighted in Table 7.9 indicate that before and after rotation, component 1 had initial eigenvalues of 2.891 accounted for 57.811 per cent of the variance among the factors respectively. These findings therefore, confirmed that the varimax rotation had converged after five simulations insignificantly enhanced the data reduction process since after rotation exercise both eigenvalues and percentage variance were explained by the components that did not change. A scree plot was also provided in the analysis as showed in Figure 7.2.

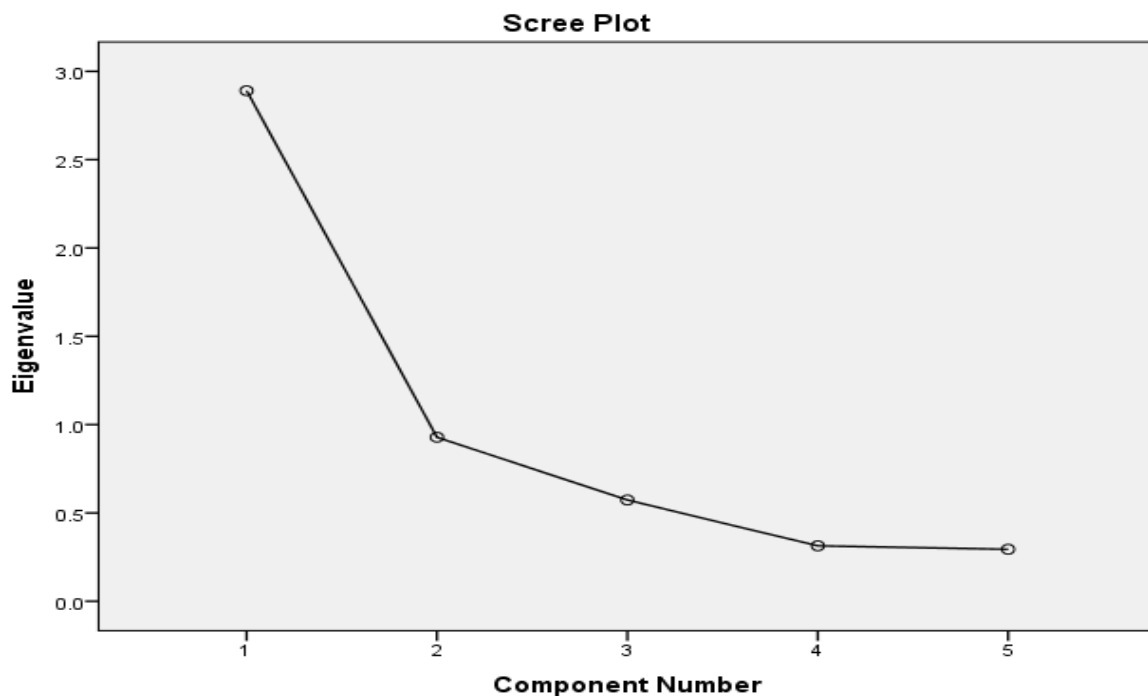


Figure 7.2: Scree plot – Employee Dedication

Source: SPSS v.26

Figure 7.2 relays that of the 5 components tested, only 1 had an eigenvalue greater than 1 with the rest having less than 1. To comprehend the employee dedication principal element denoted by one extracted component, the factor loading of each item were tested by performing the rotated component matrix as highlighted in Table 7.12.

To decide on what this one principal component represented to clarify employee dedication element that should be preferred to investigate the influence of employee engagement and skills development on employee innovation, the factor loadings extracted from each component were used.

Table 7.12: Rotated Component Matrix – Employee Dedication

Component Matrix^a	
	Component
	1
1. I am proud of the work that I do	.732
2. To me, my job is challenging.	.343
3. I am enthusiastic about my job.	.867
4. My job inspires me	.875
5. I find the work that I do full of meaning and purpose.	.849
Extraction Method: Principal Component Analysis.	
a. 1 components extracted.	

Source: SPSS v.26

Results from the Table 7.12 show all elements loaded heavily on one principal component. These factors are ‘I am proud of the work that I do’ (factor loading 0.732), ‘To me, my job is challenging’ (factor loading = 0.343), ‘I am enthusiastic about my job’ (factor loading = 0.867). ‘My job inspires me’ (factor loading = 0.875) and ‘I find the work that I do full of meaning and purpose’ (factor loading = 0.849). Taking a closer look, if these factors are adjudged collectively they communicate that employees in manufacturing sector are highly dedicated.

Table 7.13 displays a summary contribution of the one major dimension that was inferred from the categorical critical principal component factor analysis.

Table 7.13: Total Variance Explained – Employee Dedication

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
Employees in manufacturing sector are highly dedicated	2.891	57.811	57.811

Source: SPSS v.26

The results from the Table 7.13 above show that the major employee dedication factor was that employees in manufacturing sector are highly dedicated, with eigenvalue 2.891 and contributing 57.811% in variation of the factors.

7.5.3 Employee Absorption

A review of literature related to employee engaged has shown that employee absorption is a critical factor necessary for employees to be affirmed engaged in the manufacturing sector organisations in Zimbabwe. Respondents for this study were required to rate six different questions explaining employee absorption using a 5-point Likert scale ranging from 1=strongly disagree to 5=strongly agree. The input obtained from the research subject was analysed using

SPSS. A Categorical Critical Component analysis was performed to reduce the number of employee absorption elements into key elements. The component analysis extraction method conducted involved a varimax rotation with Kaiser Normalisation.

Table 7.14 shows the descriptive statistics performed on the employee absorption component. The mean scores highlighted the comparative importance of each sub-category of employee absorption. Mean scores and standard deviations were utilised to show the degree of disagreement or agreement of the participants using the six initial employee absorption elements. Recorded high mean scores indicated that employees agreed while low mean scores from the respondents indicated disagreement among the employees on the influence of employee absorption.

Table 7.14: Descriptive Statistics – Employee Absorption

	N	Mean	Std. Deviation
6. Time flies when I'm working.	200	3.89	.948
2. I am immersed in my work	200	3.79	.824
1. I feel happy when I am working intensely	200	3.74	.963
5. It is difficult to detach myself from my job.	200	3.16	1.077
3. I get carried away when I'm working	200	3.10	1.207
4. When I am working, I forget everything else around me	200	3.03	1.143
Valid N (listwise)	200		

Source: SPSS v.26

Attempts could be made to use employee absorption to influence employee innovation in the manufacturing sector. The results shown in Table 7.12 confirm that participants agreed that time is most important when working (mean = 3.89; standard deviation of 0.948). Employees are immersed by their work (mean = 3.79; standard deviation of 0.824), Cultural tourism is a basis for preserving a nation's heritage that is important for the purpose of nation branding (mean = 3.58; standard deviation of 0.608) and workers feel happy when working intensely (mean = 3.74, and standard deviation of 0.963).

The descriptive statistics on employee absorption was followed by factor analysis of the factor. To conduct the analysis the study used the KMO test of sampling adequacy. Before carrying out the KMO test data is usually tested for homoscedasticity and normality. KMO is then done to verify the inter-correlation. Usually, for this test to be carried out, the data should be checked for normality and homoscedasticity. KMO is used to determine the validity and inter-

correlation among elements of a variable in a study. Results of the KMO test are then used to check whether factor analysis is suitable to perform.

Table 7.15: KMO and Bartlett's Test - Employee Absorption

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.744
Bartlett's Test of Sphericity	Approx. Chi-Square	240.678
	Df	15
	Sig.	.000

Source: SPSS v.26

The results in Table 7.15 indicate a KMO value of 0.744. The value of 0.744 is above the rule of thumb measure of $\alpha > 0.5$. This suggests that the data was suitable for a data reduction test. Categorical Critical Component analysis was performed using the varimax method of rotation to extract principal components. The extraction followed criteria used above of recognising an eigenvalue greater than 1. Table 7.16 reveals that of the 6 items, only 2 components were extracted.

Table 7.16: Principal component factors extracted – Employee Absorption

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.535	42.257	42.257	1.927	32.121	32.121
2	1.171	19.517	61.774	1.779	29.653	61.774
3	.773	12.887	74.661			
4	.579	9.657	84.318			
5	.501	8.342	92.661			
6	.440	7.339	100.000			

Source: SPSS v.26

The findings from Table 7.16 highlight that components 1 and 2 had eigenvalues of 2.535 and 1.171 before rotation and explained 42.257% and 19.517% of the variance amongst the factors. After the rotation the eigenvalues for components 1 and 2 were recalculated to 1.927 and 1.779 with their contributions to the variance recalculated to 32.121% and 29.653% respectively. The results therefore, established that the varimax rotation that converged after 3 iterations considerably enhanced the data reduction as both eigenvalues significantly changed.

Figure 7.3 is a scree plot illustrating the extraction of the of the two components

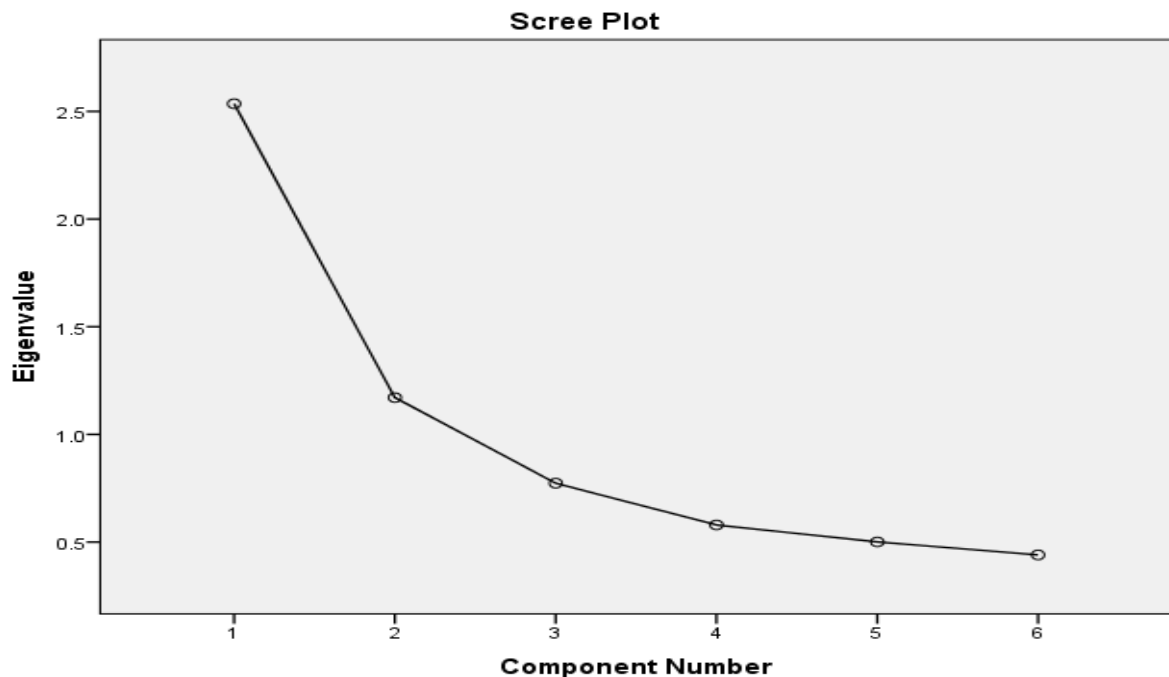


Figure 7.3: Scree plot – Employee Absorption

Source: SPSS v.26

From Figure 7.3 the scree diagram begins to flatten after the first two components. The figure also show that the two principle components had eigenvalues of Kaiser above 1. The other three principle components had eigenvalues of Kaiser less than 1 thus there were removed from the analysis. Rotated Component Matrix was performed to establish the precise nature of the two principal components extracted. Table 7.17 below displays the loadings items of the two extracted components.

Table 7.17: Rotated Component Matrix - Employee Absorption

	Component	
	1	2
I feel happy when I am working intensely		.743
I am immersed in my work		.795
I get carried away when I'm working	.756	
When I am working, I forget everything else around me	.783	
It is difficult to detach myself from my job.	.764	
Time flies when I'm working.		.686
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation.		
a. Rotation converged in 3 iterations.		

Source: SPSS v.26

Table 7.17 show the factors which loaded heavily on principal component factor 1 were ‘I get carried away when I’m working’ (factor loading = 0.756), ‘When I am working, I forget everything else around me’ (factor loading = 0.783) and “It is difficult to detach myself from my job” (factor loading = 0.764). These factors were inclined to ‘workers feel connected and absorbed by the work they do.’ On the other hand, factors such as ‘workers feel happy when working intensely’ (factor loading = 0.743), employees are immersed by their work (factor loading = 0.795) and workers feel time flies when they are working (factor loading = 0.686) loaded heavily on principal component 2. These factors were inclined to ‘workers are immersed when they work intensely on time’.

Table 7.18 shows the rotation sum of loadings that ranks the two broad employee absorptions.

Table 7.18: Total variance explained – Employee Absorption

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1. workers feel connected and absorbed by the work they do	1.927	32.121	32.121
2. workers feel connected and absorbed by the work they do	1.779	29.653	61.774

Source: SPSS v.26

From the total variance explained above it can be summarised two components of employee absorption could be used to answer the research questions of this study. The general themes of these components were: ‘workers feel connected and absorbed by the work they do’ with an eigenvalue of 1.927 explaining 32.121% of variation in factors; and workers feel connected and absorbed by the work they do with an eigenvalue of 1.779 and also accounting for 29.653% variation in factors.

7.6 Skills Development

This study also sought to determine if skills development influenced employee innovation in the Zimbabwean manufacturing sector. Descriptive statistics in the form of means and standard deviation were used to summarise into simple statistics responses from the large number of respondents. Table 7.19 shows the descriptive statistics of the skills development dimensions measured on a five-point Likert scale.

Table 7.19: Descriptive statistics for skills development

	N	Mean	Std. Deviation
I think it's important to develop myself	200	4.57	.761
Training is necessary to improve my work processes	200	4.24	.703
My qualifications are important for this job	200	4.11	.878
My qualifications and skills match the requirements of the job	200	4.10	.928
I require further training to motivate me to improve my performance	200	4.06	.935
There are policies regarding training and development of employees in the organisation	198	3.90	.964
The training I received was relevant to my job	200	3.88	1.035
The organisation provides training to its employees	200	3.88	.956
The training has an impact on my job performance	200	3.87	1.026
Training has provided me with important workplace skills	200	3.86	1.006
The training has enabled me to possess the requisite skills and knowledge for my job	200	3.85	1.004
The training has helped improve my work performance	200	3.74	1.099
Have you received any training since joining the organisation	200	3.73	1.142
The training I received is good for my position	200	3.70	.912
The quality of work has improved due to training	200	3.68	.995
I have been selected for training in the organisation	200	3.67	1.107
Training is a priority in this organisation	200	3.59	1.099
The training has addressed my individual needs	200	3.54	1.129
The training I received is of superior quality	200	3.52	1.032
The training objectives are clearly communicated in this organisation	199	3.40	1.082
The organisation funds individuals who want to go for training	200	3.08	1.339
I think it's necessary to pay my own tuition for training	200	2.78	1.249
I have complained with regards to the training I have received on this job	200	2.51	1.022
The government subsidises training	200	2.49	1.186
I pay for my own training	200	2.39	1.311
Valid N (listwise)	197		

Source: SPSS v.26

Looking at the elements of skills development, the results from Table 7.19 highlight that the respondents agreed with the notions: I think it's important to develop myself, training is necessary to improve my work processes, my qualifications are important for this job, My qualifications and skills match the requirements of the job, I require further training to motivate me to improve my performance and there are policies regarding training and development of employees in the organization. These were indicated by high mean scores of 4.57, 4.24, 4.11, 4.10, 4.06 and 3.90 respectively.

The results also revealed that some participants were neutral in response to other skill development elements (those with mean score of 3). These include: the training objectives are clearly communicated in this organisation, the organisation funds individuals who want to go for training, I think it's necessary to pay for my own tuition for training, I have complained with regards to the training I have received on this job, the government subsidises training and I pay for my own training.

To test the sampling adequacy the study used KMO measure was used. Again the lower the KMO value the more suited the data is for Factor Analysis. Table 7.20 shows the results of the KMO test performed to determine the sampling adequacy. KMO of 0.906 was obtained for the skills development variable. 0.906 is above the required 0.5 the data was regarded as suitable for Factor Analysis model.

Table 7.20: KMO and Bartlett's Test – Skills development

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.906
Bartlett's Test of Sphericity	Approx. Chi-Square	2872.849
	df	300
	Sig.	.000

Source: SPSS v.26

The Bartlett's Test indicates the strength of the connection between variable elements. It measures the correlation matrix to determine if it is an identity matrix. Table 7.18 reveals that the Bartlett's Test of Sphericity is significant ($\chi^2(300) = 2872.849$, $p < 0.001$) as it is below 0.05. In this case the lower significance level is marginal enough to allow rejection of the null hypothesis. The results of the Bartlett's Test of Sphericity therefore suggest that the correlation between the variable elements is adequate to allow for factor analysis.

The study adopted the Principal Component Factor analysis extraction technique to extract the components using SPSS to model factor analysis. In conducting the analysis the default SPSS for retaining components with eigen values greater than Kaiser 1 was used.

Table 7.21: Principal component factor extracted – Skills development

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.365	37.461	37.461	7.333	29.332	29.332
2	2.262	9.048	46.510	3.106	12.423	41.756
3	1.627	6.510	53.020	1.847	7.387	49.143
4	1.397	5.587	58.607	1.814	7.257	56.400
5	1.224	4.898	63.504	1.475	5.900	62.300
6	1.091	4.363	67.867	1.201	4.803	67.103
7	1.008	4.034	71.901	1.199	4.798	71.901
8	.854	3.418	75.318			
9	.767	3.068	78.387			
10	.700	2.801	81.188			
11	.588	2.353	83.541			
12	.511	2.044	85.586			
13	.455	1.819	87.405			
14	.398	1.591	88.996			
15	.365	1.459	90.455			
16	.340	1.360	91.815			
17	.324	1.297	93.113			
18	.291	1.164	94.277			
19	.284	1.135	95.412			
20	.255	1.020	96.432			
21	.235	.940	97.373			
22	.217	.867	98.240			
23	.175	.700	98.940			
24	.153	.611	99.551			
25	.112	.449	100.000			

Source: SPSS v.26

Table 7.21 shows the results of the Principal Component Factor test conducted to extract the components. Of the 25 components on skills development, only 8 of the components met the criterion used to extract the components (Kaiser greater 1). The results from Table 7.21 show that before rotation, components 1, 2, 3, 4, 5, 6 and 7 had initial eigenvalues of 9.365, 2.262,

1.627, 1.397, 1.224, 1.091 and 1.008 respectively and accounted for 37.461%, 9.048%, 6.510%, 5.587%, 4.898%, 4.363% and 4.034% of the variance on the factors respectively. The rotation showed that the eigenvalues for components 1, 2, 3, 4, 5, 6 and 7 were recomputed to 7.333, 3.106, 1.847, 1.814, 1.475, 1.201 and 1.199 with their contributions to the variance changing to 29.332%, 12.423%, 7.387%, 7.257%, 5.900%, 4.803% and 4.798% after calculations. These results confirmed that a significant varimax rotation convergence occurred after seven simulations which also enhanced the data reduction after the rotation process. The rotation process also showed that both eigenvalues and percentage variance explained by the components significantly changed.

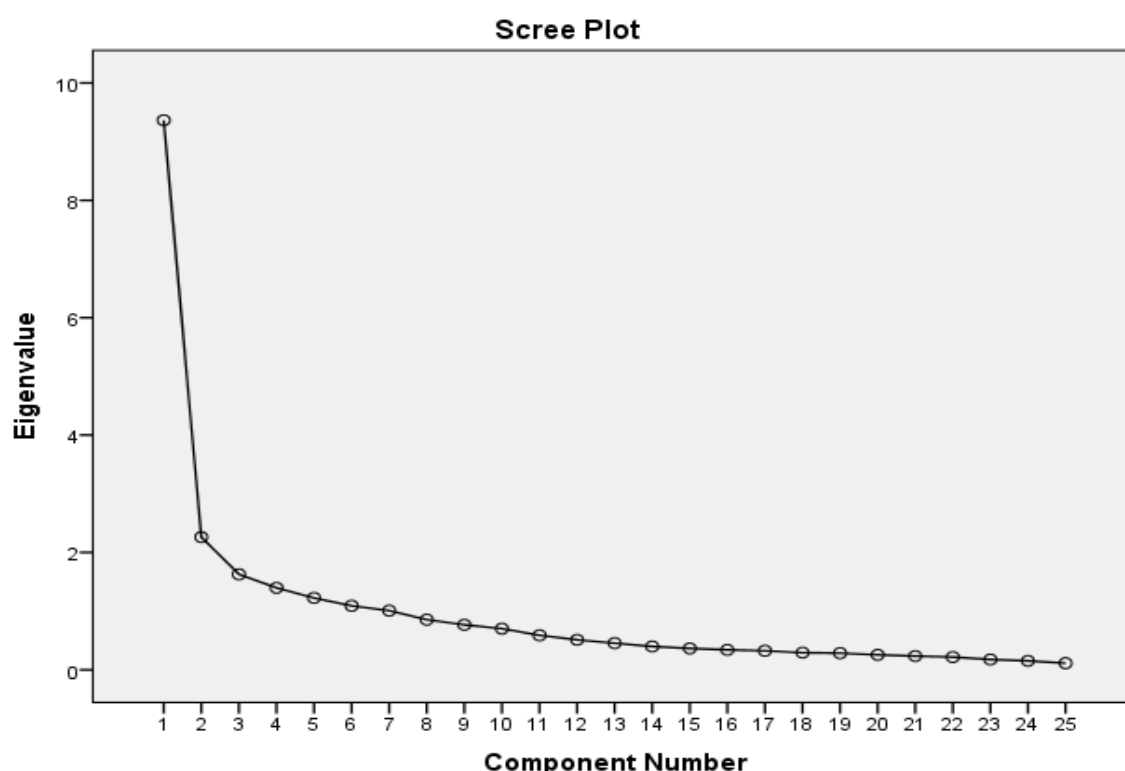


Figure 7.4: Scree plot – Skills development

Source: Primary data

A scree plot diagram was also provided for the variable skills development. Figure 7.4 shows that only 7 of the 25 components under skills development had eigenvalues with a Kaiser greater than 1 thus meeting the Kaiser preset condition of 1. The rest of the components were less than 1 which led to them being discarded. To understand the seven principal components factors of the skills development variable the factor loading of each component was tested using the rotated component matrix (Table 7.22). The rotated component matrix was set to

suppress loadings less than 0.6 thus there was more precision in establishing the components influencing skills development.

Table 7.22: Rotated Component Matrix – Skills Development

	Component						
	1	2	3	4	5	6	7
Have you received any training since joining the organisation	.787						
The organisation provides training to its employees	.628						
I have been selected for training in the organisation	.791						
The training I received was relevant to my job	.898						
The training has an impact on my job performance	.890						
The training has helped improve my work performance	.839						
The training has addressed my individual needs	.723						
The training has enabled me to possess the requisite skills and knowledge for my job	.689						
My qualifications and skills match the requirements of the job			.866				
My qualifications are important for this job			.865				
I require further training to motivate me to improve my performance				.833			
Training is necessary to improve my work processes				.846			
The training I received is of superior quality	.729						

The training I received is good for my position	.786						
I have complained with regards to the training I have received on this job					.718		
I pay for my own training					.682		
I think it's important to develop myself						.703	
I think it's necessary to pay my own tuition for training						.747	
The organisation funds individuals who want to go for training		.618					
The government subsidises training							.898
They are policies regarding training and development of employees in the organisation		.529					
Training is a priority in this organisation		.786					
The training objectives are clearly communicated in this organisation		.739					
The quality of work has improved due to training	.615						
Training has provided me with important workplace skills	.639						
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation.							
a. Rotation converged in 7 iterations.							

Source: SPSS v.26

From the results on Table 7.22 items that loaded heavily on principal component 1 were: ‘have you received any training since joining the organisation?’, ‘the organisation provides training to its employees’, ‘I have been selected for training in the organisation’, ‘the training I received was relevant to my job’, ‘the training has an impact on my job performance’, ‘the training has helped improve my work performance’, ‘the training has addressed my individual needs’, ‘the training has enabled me to possess the requisite skills and knowledge for my job’, ‘the training I received is of superior quality’, ‘the training I received is good for my position’, ‘the quality of work has improved due to training’ and ‘training has provided me with important workplace skills’. Their factor loadings are .787, .628, .791, .898, .890, .839, .723, .689, .729, .786, .615 and .639 respectively. These factors, if connected would mean that the “organisation provides quality and relevant training for my job”.

The factor which loaded heavily on principal component factor 2 were: ‘the organisation funds individuals who want to go for training’ (factor loading = 0.618), ‘here are policies regarding training and development of employees in the organisation’ (factor loading = 0.529), ‘training is a priority in this organisation’ (factor loading = 0.786) and ‘the training objectives are clearly communicated in this organisation’ (factor loading = 0.739). These factors are inclined to mean “organisations have a training and development policy”.

The factors which loaded heavily on principal component 3 were, ‘my qualifications and skills match the requirements of the job’ (factor loading = 0.866) and ‘my qualifications are important for this job’ (factor loading = 0.865 these factors could mean workers have important qualifications for their jobs.

The principal component four was made up of two factors which included: ‘I require further training to motivate me to improve my performance’ (factor loading = 0.833) and ‘training is necessary to improve my work processes’ (factor loading = 0.846). These factors can be connected to mean organisational training motivates staff and improves the work process.

The factors including: ‘I have complaints with regard to the training I have received on this job’ (factor loading = 0.718) and ‘I pay for my own training’ (factor loading = 0.682) heavily loaded on principal component factor 5 and could mean organisations should offer free and up to date training facilities. Principal component factor 6 comprised two items which were: ‘I think it’s important to develop myself’ (factor loading = 0.703) and ‘I think it’s necessary to pay my own tuition for training’ (factor loading = 0.747). These factors can be combined to mean workers are eager to develop themselves by paying for training. Lastly was the item that

the government subsidises training’ (factor loading = 0.898) which became principal component factor 7.

Table 7.23 displays a summary of the 7 extracted principal component factors in rank order according to their contribution for prioritisation of skills development in influencing employee innovation.

Table 7.23: Total Variance explained – Skills Development

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1. The organisation provides quality and relevant training for my job	7.333	29.332	29.332
2. The organisations have a training and development policy	3.106	12.423	41.756
3. Workers have important qualifications for their jobs	1.847	7.387	49.143
4. Organisational training motivates staff and improves work processes	1.814	7.257	56.400
5. Organisations should offer free and up-to-date training facilities	1.475	5.900	62.300
6. Workers are eager to develop themselves by paying for training.	1.201	4.803	67.103
7. The government subsidises training	1.199	4.798	71.901

Source: SPSS v.26

From the principal component factor analysis, it has been deduced that the major skills development elements to be considered when investigating the influence of skills development in determination of employee innovation in the Zimbabwean manufacturing sector include ‘The organisation provides quality and relevant training for my job’ which has eigenvalue of 7.333 and accounts for 29.332% of the variation in the factors, ‘organisations have training and development policy’ having an eigenvalue of 3.106 and accounting for 12.423% of the variance among the factors, ‘workers have important qualifications for their jobs’, with an eigenvalue of 1.847 and variation towards employee innovation of 7.387% of the variance among the factors, ‘organisational training motivates staff and improves work process’ which has an eigenvalue of 1.814 and accounts for 7.257% of the variation in the factors, ‘organisations should offer free and up-to-date training facilities’ with an eigenvalue of 1.475 and accounting for 5.900% in variation in the factors. The other two factors were that workers are eager to develop themselves by paying for training with an eigenvalue of 1.201 and accounting for 4.803% in variation in the factors and that the government subsidises training with an

eigenvalue of 1.199 and accounting for 4.798% of the variance among the factors in the manufacturing sector.

7.7 Employee Innovation

Like the other variables (employee engagement and skills development), descriptive statistics of employee innovation were also computed to summarise responses from the participants in the study to come up with a few simple statistics. Table 7.24 shows the descriptive statistics of the employee innovation variable measured on a 5-point Likert scale.

Table 7.24: Descriptive Statistics for Employee Innovation

	N	Mean	Std. Deviation
Nothing is more exciting than seeing my ideas turn into reality	200	4.45	.670
If I see someone in trouble I help out in any way I can	200	4.36	.602
I love to challenge the status quo	200	4.26	.711
I enjoy finding solutions to complex problems	200	4.16	.663
I excel at identifying opportunities	200	4.09	.775
I try to come up with unique ways of solving problems	200	3.97	.683
Wherever I have been, I have been a powerful force for constructive change	200	3.95	.749
I usually break a complex assignment into parts to obtain greater understanding	200	3.93	.733
I think about an assignment from multiple perspectives	200	3.91	.643
I am great at turning problems into opportunities	200	3.90	.799
I usually come up with a significant number of alternatives to the same problem before I make my final decision	200	3.90	.796
I feel driven to make a difference in my workplace	200	3.86	.943
My supervisor encourages employees to try and solve problems in different ways	200	3.80	.942
I sometimes challenge myself to find problems or challenges before they occur	200	3.72	.811
My boss encourages new ideas from employees	200	3.70	.991
If I have an idea no obstacle will prevent me from making it happen	200	3.65	.944
Employees at my workplace are encouraged to search for new ideas	200	3.63	1.062
My organisation allow employees to come up with new and practical ideas	200	3.62	1.059
The environment I work in permits me to come up with new ideas	200	3.62	1.055
My organisation regard employees as a good source of innovative ideas	200	3.56	1.035
My employer encourages employees to contribute to the development of new business	200	3.56	1.050
Our managers recognise employees who are creative and innovative in doing their jobs	200	3.56	1.101
My employer encourages employees to contribute to new product development	200	3.51	1.066
I work in an environment which discourages new ideas	200	2.57	1.210
Valid N (listwise)	200		

Source: SPSS v.26

The top five constructs on which respondents agreed to are ‘Nothing is more exciting than seeing my ideas turn into reality’, ‘If I see someone in trouble I help out in any way I can’, ‘I love to challenge the status quo’, ‘I enjoy finding solutions to complex problems’ and ‘I excel at identifying opportunities’. These have high mean scores of 4.45, 4.36, 4.26, 4.16 and 4.09 respectively.

As a precondition for Factor Analysis the study used the KMO method to determine the sampling adequacy. Table 7.25 indicates that the KMO value of employee innovation was 0.892, a figure above the recommended value of 0.5. For that reason, the above 0.5 suggested that the data was suitable to perform factor analysis.

Table 7.25: KMO and Bartlett's Test: Employee Innovation

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.892
Bartlett's Test of Sphericity	Approx. Chi-Square	2848.578
	Df	276
	Sig.	.000

Source: SPSS v.26

Table 7.25 illustrates that the Bartlett’s Test of Sphericity result is significant ($\chi^2(276) = 2848.578$, $p < 0.001$) and lower than 0.05. This result indicates that the connection amongst the employee innovation items is appropriate enough to perform factor analysis.

With Kaiser Normalisation, the Principal Component Factor analysis extraction method was performed to model the factor analysis. The tests were performed using SPSS and maintained the default criterion of upholding factor components with an eigenvalue of greater than 1.

Table 7.26: Principal component factors extracted: Employee Innovation

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.278	34.490	34.490	6.185	25.772	25.772
2	4.009	16.704	51.194	2.855	11.895	37.667
3	1.395	5.812	57.006	2.683	11.179	48.846
4	1.107	4.614	61.620	2.657	11.073	59.918
5	1.038	4.324	65.944	1.446	6.025	65.944
6	.938	3.908	69.852			
7	.812	3.383	73.234			
8	.786	3.276	76.511			
9	.627	2.611	79.122			
10	.614	2.557	81.679			
11	.537	2.237	83.916			
12	.499	2.079	85.995			
13	.412	1.716	87.711			
14	.401	1.669	89.380			
15	.374	1.559	90.939			

16	.363	1.514	92.452			
17	.344	1.432	93.885			
18	.281	1.170	95.055			
19	.270	1.126	96.181			
20	.270	1.124	97.305			
21	.225	.939	98.244			
22	.166	.691	98.935			
23	.142	.591	99.526			
24	.114	.474	100.000			

Source: SPSS v.26

Table 7.26 reveals that there were only five components with eigenvalues greater than 1. In addition, Table 7.26 shows that prior to performing rotation the components 1, 2, 3, 4 and 5 had eigenvalues of 8.278, 4.009, 1.395, 1.107 and 1.038 respectively and accounted for 34.490%, 16.704%, 5.812%, 4.614% and 4.324% of the variances within the factors. After rotation the components 1, 2, 3, 4 and 5 displayed significant eigenvalues of 6.185, 2.855, 2.683, 2.657 and 1.446 with their contributions to the variance recalculated to 25.772%, 11.895%, 11.179%, 11.073% and 6.025%. From these results, it is varimax rotation converged after five simulations which meaningfully enhanced the data reduction method.

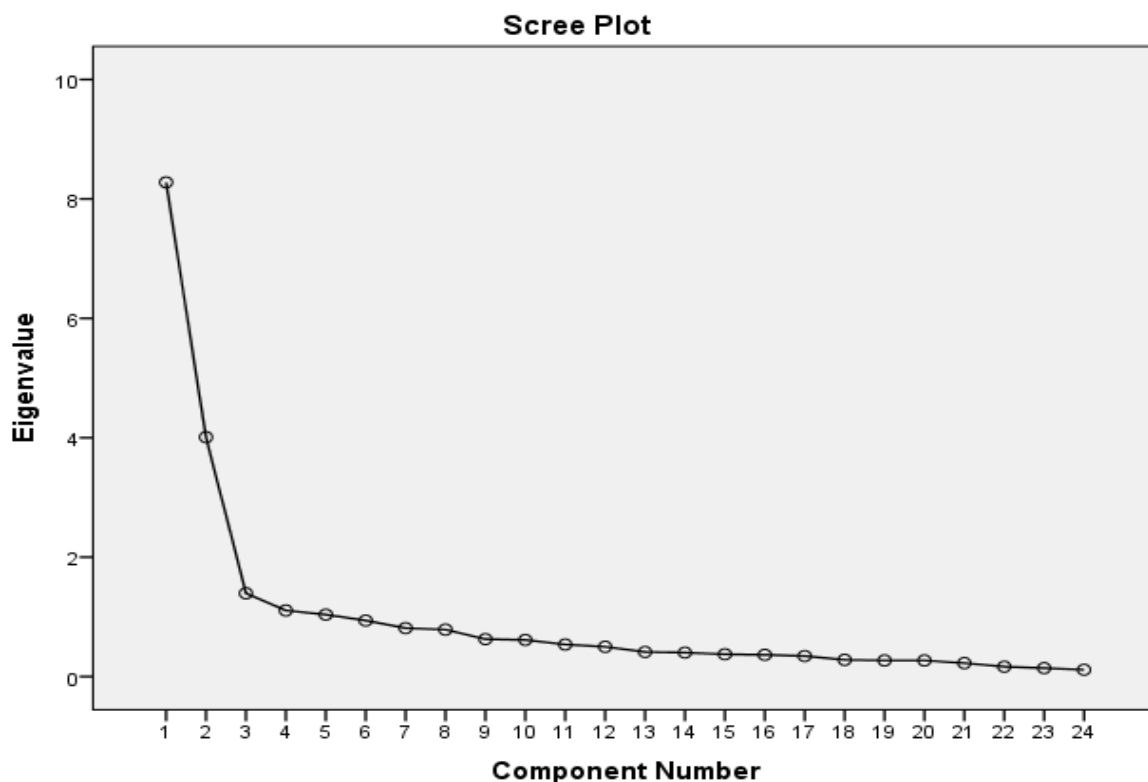


Figure 7.5: Scree plot – Employee Innovation

Source: SPSS v.26

As shown in Figure 7.5 of the 24 items contained in the employee innovation section of the questionnaire only 5 had eigenvalues greater than 1 with the rest falling below 1. Therefore, to understand the items signified by the 5 extracted principal components factors, the factor loading of each extracted component was considered using the rotated component matrix indicated in Table 7.25. It was set that factor loading less than 0.5 would be suppressed so that there was more precision in determining the factor on which the specific employee innovation elements loaded heavily.

Table 7.27: Rotated Component Matrix – Employee Innovation

	Component				
	1	2	3	4	5
My boss encourages new ideas from employees					.604
My supervisor encourages employees to try and solve problems in different ways					.615
Our managers recognise employees who are creative and innovative in doing their jobs	.716				
My organisation regards employees as a good source of innovative ideas	.815				
Employees at my workplace are encouraged to search for new ideas	.858				
My organisation allo employees to come up with new and practical ideas	.878				
My employer encourages employees to contribute to the development of new business	.856				
My employer encourages employees to contribute to new product development	.867				
I feel driven to make a difference at my workplace	.537				
Wherever I have been, I have been a powerful force for constructive change		.505			
Nothing is more exciting than seeing my ideas turn into reality			.834		
I love to challenge the status quo			.755		
I excel at identifying opportunities			.599		
If I have an idea no obstacle will prevent me from making it happen		.728			
I am great at turning problems into opportunities		.609			
If I see someone in trouble, I help out in any way I can			.608		
The environment I work in permits me to come up with new ideas	.760				

I work in an environment which discourage new ideas	.507				
I try to come up with unique ways of solving problems		.548			
I enjoy finding solutions to complex problems		.527			
I usually come up with a significant number of alternatives to the same problem before I make my final decision				.621	
I sometimes challenge myself to find problems or challenges before they occur				.645	
I think about an assignment from multiple perspectives				.841	
I usually break a complex assignment into parts to obtain greater understanding				.749	
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation.					
a. Rotation converged in 7 iterations.					

Source: SPSS v.26

Results from Table 7.27 show that many items loaded heavily on principal component 1, these are: ‘our managers recognise those that are innovative in doing their jobs’ (factor loading = 0.716), ‘my organisation regards employees as fountains of innovative ideas’ (factor loading = 0.815), ‘employees at my workplace are encouraged to search for new ideas’ (factor loading = 0.858), ‘my organisation allows employees to come up with new and practical ideas’ (factor loading = 0.878), ‘my employer encourages employees to contribute to the development of new business’ (factor loading = 0.856), ‘my employer encourages employees to contribute to new product development’ (factor loading = 0.867), ‘I feel driven to make a difference at my workplace’ (factor loading = 0.537), ‘the environment I work in permits me to come up with new ideas’ (factor loading = 0.760) and ‘I work in an environment which discourages new ideas’ (factor loading = 0.507). These factors if considered collectively could relate to organisations considering employee innovation critical for the development of the organisation.

The loadings on the principal component factor 2 included: ‘wherever I have been, I have been a powerful force for constructive change’ (factor loading = 0.505), ‘whenever I come up with an idea, nothing will stop me from implementing it.’ (Factor loading = 0.728), ‘I am great at turning problems into opportunities’ (Factor loading = 0.609), ‘I try to come up with unique ways of solving problems’ (Factor loading = 0.548) and ‘I enjoy finding solutions to complex problems’ (Factor loading = 0.527). These factors incline towards employees who are a source of innovation in an organisation.

The items including: ‘nothing is more exciting than seeing my ideas turn into reality’ (factor loading = 0.834), ‘I love to challenge the status quo’ (factor loading = 0.755), ‘excel at identifying opportunities’ (factor loading = 0.599) and ‘if I see someone in trouble I help out in any way I can’ (factor loading = 0.608) heavily loaded on principal component factor 3. These factors could collectively mean employees are motivated if their innovative ideas are implemented.

Moreover, the factors that loaded heavily on principal component factor 4 were: ‘I usually come up with a significant number of alternatives to the same problem before I make my final decision’ (factor loading = 0.621), ‘I sometimes challenge myself to find problems or challenges before they occur’ (factor loading = 0.645), ‘I think about an assignment from multiple perspectives’ (factor loading = 0.841) and ‘I usually break a complex assignment into

parts to obtain greater understanding' (factor loading = 0.749). These factors refer to an employee's ability to solve problems.

Lastly, the last two items which loaded on principal component 5 were: 'my boss encourages new ideas from employees' (factor loading = 0.604) and 'my supervisor encourages employees to try and solve problems in different ways' (factor loading = 0.615). These factors if considered collectively could refer to top management support being important in achieving employee innovation.

Just like the employee engagement and skills development extracted principle components, the employee innovation extracted component factors were presented in rank order for easier prioritisation of the employee innovation construct. The principal component factors which were extracted from the factor analysis were presented in rank order for easier prioritisation of employee innovation construct. Table 7.28 displays a summary of how the five components were inferred from the categorical critical principal component factor analysis.

Table 7.28: Total variance explained: Employee Innovation.

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1. Organisations consider employee innovation important for the development of the firm	6.185	25.772	25.772
2. Employees are a source of innovation in an organisation	2.855	11.895	37.667
3. Employees are motivated if their innovative ideas are implemented	2.683	11.179	48.846
4. Employee's innovativeness help in problem solving in an organisation	2.657	11.073	59.918
5. Top management support is important in achieving employee innovation	1.446	6.025	65.944

Source: SPSS v.26

Table 7.28 shows the total variance explained summary of the 5 extracted principal component factors. These include firstly, 'organisations consider employee innovation important for the development of the firm' with eigenvalue of 6.185 and accounting for 25.772% variation of the factors. Secondly, 'employees are a source of innovation in an organisation' has eigenvalue of 2.855 and contribution of 11.895% of variation in factors. Thirdly, 'employees are motivated if their innovative ideas are implemented' which has eigenvalue of 2.683 and variation of 11.179% in determination of employee innovation. Fourthly, 'employee's innovativeness helps in problem solving in an organisation' with an eigenvalue of 2.657 and accounting for 11.073% in variation of the factors and finally, 'top management support is important in

achieving employee innovation' with an eigenvalue of 1.445 and accounting for 6.025% variation of the factors.

The above analysis provided insightful information, however additional analyses were required to explicate the landscape of relationships between dependent variable and independent variables in line with the research model and the objectives formulated. Regression and correlation analysis were done as detailed below.

7.8 Presentation and interpretation of findings from Structural Equation Modelling (SEM) of determining the factors

This section of the chapter presents SEM results on the variables of the study. To determine the factors influencing each variable, CFA was conducted first followed by the Goodness of fit test and path analysis to confirm the model.

7.8.1 To determine the factors influencing employee engagement

The SEM based Confirmatory Factor Analysis (CFA) shows significant loading for the construct with $p < 0.001$ recorded for employee engagement measurement items. This significant value authenticates the suitability of the employee engagement validity in elucidating their link with the latent construct (employee engagement). The three factors including employee vigour, employee dedication and absorption have positive coefficients towards employee engagement. Their coefficients are fitted as 3.780, 3.966 and 3.452 respectively.

Table 7.29 Goodness of fit of employee engagement

Structural equation model			Number of obs		=	200	
Estimation method			= ml				
Log likelihood			= -516.81533				
(1) [EmployeeVigor]Engagement = 1							
	OIM						
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]		
Measurement							
EmployeeVigor							
Engagement	1	(constrained)					
_cons	3.78015	.0419186	90.18	0.000	3.697991	3.862309	
Dedication							
Engagement	1.118171	.1502478	7.44	0.000	.8236903	1.412651	
_cons	3.966	.049277	80.48	0.000	3.869419	4.062581	
Absorption							
Engagement	1.003902	.1359575	7.38	0.000	.7374303	1.270374	
_cons	3.45245	.0467506	73.85	0.000	3.360821	3.544079	
var(e.EmployeeVigor)	.1501537	.0275315			.1048247	.2150843	
var(e.Dedication)	.2339828	.0371477			.1714135	.3193912	
var(e.Absorption)	.2342699	.0330107			.1777357	.3087866	
var(Engagement)	.2012797	.0392698			.1373189	.2950326	
LR test of model vs. saturated: chi2(0) = 0.00, Prob > chi2 = .							

Source: SPSS v.26

Table 7.29 displays the SEM results for the employee engagement variables. The results highlight that the test achieved the required values necessary for the goodness of fit indices with p greater than 0.05 suggesting that the model was a good fit. An explanation of the Goodness of fit results of employee engagement is presented next.

7.8.1.1 Goodness of fit of employee engagement

Wegner (2012) points out that, in order to achieve unbiased results from an independent variable when predicting the variation in the dependent variable, a ‘goodness-of-fit’ measure is significant. The best way to perform the test is through the coefficient of determination, denoted by R^2 , where $0 < R^2 < 1$.

Table 7.30: Equation employee engagement

Equation-level goodness of fit						
depvars	Variance			R-squared	mc	mc2
	fitted	predicted	residual			
observed						
EmployeeVig~r	.3514335	.2012797	.1501537	.5727392	.7567954	.5727392
Dedication	.485644	.2516612	.2339828	.518201	.7198618	.518201
Absorption	.4371235	.2028536	.2342699	.4640647	.681223	.4640647
overall				.7664611		

mc = correlation between depvar and its prediction
mc2 = mc^2 is the Bentler-Raykov squared multiple correlation coefficient

Source STATA

The R2 above indicates that about 76.6% ($R^2=.766$) of the employee engagement is attributable to the employee vigour, employee dedication and absorption parameters. This signifies that the econometric model explains 76.6% of the variations in the employee engagement or the exploratory power of the multiple structural equation model used. Further explanation of this relationship is presented in Figure 7.6.

Path analysis diagram

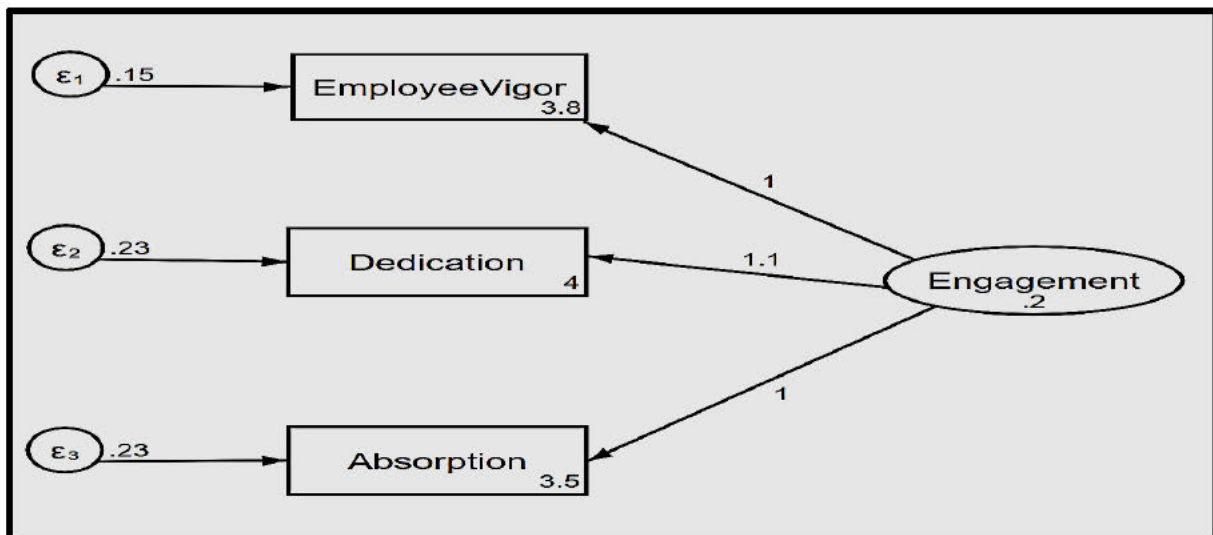


Figure 7.6: Path analysis: employee engagement

Source: STATA

Figure 7.6 provides a path analysis diagram showing the resulting structural model for employee engagement. The path diagram also indicates the resulting regression estimates. As

depicted in Figure 7.6 the factors employee vigour, dedication and absorption have a direct but positive relationship with employee engagement.

7.8.2 Factors influencing skills development of employees in the manufacturing sector in Zimbabwe

The CFA was done using SEM to show the significant loading for constructs. Table 7.31 presents the goodness of fit for skills development. The goodness of fit for skills development was conducted to obtain unbiased results when predicting variation (Wegner, 2012).

Table 7.31: Goodness of fit for skills development

Structural equation model				Number of obs	=	200	
Estimation method				= ml			
Log likelihood				= -1714.9967			
(1) [sd1]SkillsDev = 1							
	OIM						
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]		
Measurement							
sd1							
SkillsDev	1	(constrained)					
_cons	3.745	.0594525	62.99	0.000	3.628475	3.861525	
sd2							
SkillsDev	1.424614	.3131543	4.55	0.000	.8108426	2.038385	
_cons	3.49125	.0616959	56.59	0.000	3.370328	3.612172	
sd3							
SkillsDev	.3051835	.101809	3.00	0.003	.1056414	.5047256	
_cons	4.1025	.0580191	70.71	0.000	3.988785	4.216215	
sd4							
SkillsDev	.0900788	.0929465	0.97	0.332	-.092093	.2722506	
_cons	4.1525	.0516233	80.44	0.000	4.05132	4.25368	
sd5							
SkillsDev	-.4767307	.118811	-4.01	0.000	-.709596	-.2438653	
_cons	2.45	.065192	37.58	0.000	2.322226	2.577774	
sd6							
SkillsDev	.0109361	.098099	0.11	0.911	-.1813344	.2032066	
_cons	3.6725	.0559685	65.62	0.000	3.562804	3.782196	
sd7							
SkillsDev	.2882691	.1487977	1.94	0.053	-.0033692	.5799073	
_cons	2.49	.083663	29.76	0.000	2.326024	2.653976	
var(e.sd1)	.3579387	.0819754			.2284893	.560727	
var(e.sd2)	.0530127	.1447969			.0002509	11.20264	
var(e.sd3)	.6407407	.0648549			.5254421	.7813396	
var(e.sd4)	.5301621	.0530721			.4357112	.6450873	
var(e.sd5)	.7706864	.0778421			.632271	.9394033	
var(e.sd6)	.626452	.0626455			.5149526	.7620937	
var(e.sd7)	1.3709	.1372934			1.126573	1.668216	
var(SkillsDev)	.3489807	.0956813			.2039034	.5972807	
LR test of model vs. saturated: chi2(14) = 46.39, Prob > chi2 = 0.0000							
.							
.							

Source: STATA

Results confirm the suitability and validity of the seven factors including ‘the organisation provides quality and relevant training for my job’ (sd1, $\beta = 3.745$ $P < 0.01$), ‘organisations have training and development policy’ (sd2, $\beta = 3.491$ $P < 0.01$), ‘workers have important qualifications for their jobs’ (sd3, $\beta = 4.1025$ $P < 0.01$), ‘organisational training motivates staff and improves the work process’ (sd4, $\beta = 4.1525$ $P < 0.01$), ‘organisations should offer free and up to-date training facilities’ (sd5, $\beta = 2.45$ $p < 0.01$), ‘workers are eager to develop themselves by paying for training’ (sd6, $\beta = 3.6725$, $p < 0.01$) and ‘the government subsidises training’ sd7, $\beta = 2.49$, $p < 0.01$). These factors are all significant in explaining their relationship with the latent construct (skills development) since the p-values ($p > |z|$) are less than 0.05.

7.8.2.1 Goodness of fit for employee skills development model

Table 7.32 presents the Goodness of fit measure for the variable skills development. To determine the measure the coefficient of determination test signified by R^2 , where $0 < R^2 < 1$ was performed.

Table 7.32: Equation skills development

Equation-level goodness of fit						
depvars	fitted	Variance predicted	residual	R-squared	mc	mc2
observed						
sd1	.7069194	.3489807	.3579387	.4936641	.7026123	.4936641
sd2	.7612776	.7082649	.0530127	.9303635	.9645535	.9303635
sd3	.6732438	.032503	.6407407	.0482782	.2197231	.0482782
sd4	.5329938	.0028317	.5301621	.0053128	.072889	.0053128
sd5	.85	.0793136	.7706864	.0933101	.305467	.0933101
sd6	.6264937	.0000417	.626452	.0000666	.0081621	.0000666
sd7	1.3999	.029	1.3709	.0207157	.1439296	.0207157
overall				.9355482		
mc = correlation between depvar and its prediction						
mc2 = mc^2 is the Bentler-Raykov squared multiple correlation coefficient						

Source: STATA

The R^2 indicates that about 93.55% ($R^2 = .9355482$) of the employee skills development is attributable to the seven parameters (sd1-sd7) which are: ‘The organisation provides quality and relevant training for my job’ (sd1), ‘organisations have a training and development policy’ (sd2), ‘workers have important qualifications for their jobs’ (sd3), ‘organisational training motivates staff and improves the work process’ (sd4), ‘organisations should offer free and up-to-date training facilities’ (sd5), ‘workers are eager to develop themselves by paying for training’ (sd6) and ‘the government subsidises training’ (sd7). This signifies that the fitted SEM explains 93.55% of the variations in the employee skills development or the exploratory power

of the multiple SEM used. The resultant path analysis for the skills development variable is presented in the following section.

Path analysis diagram

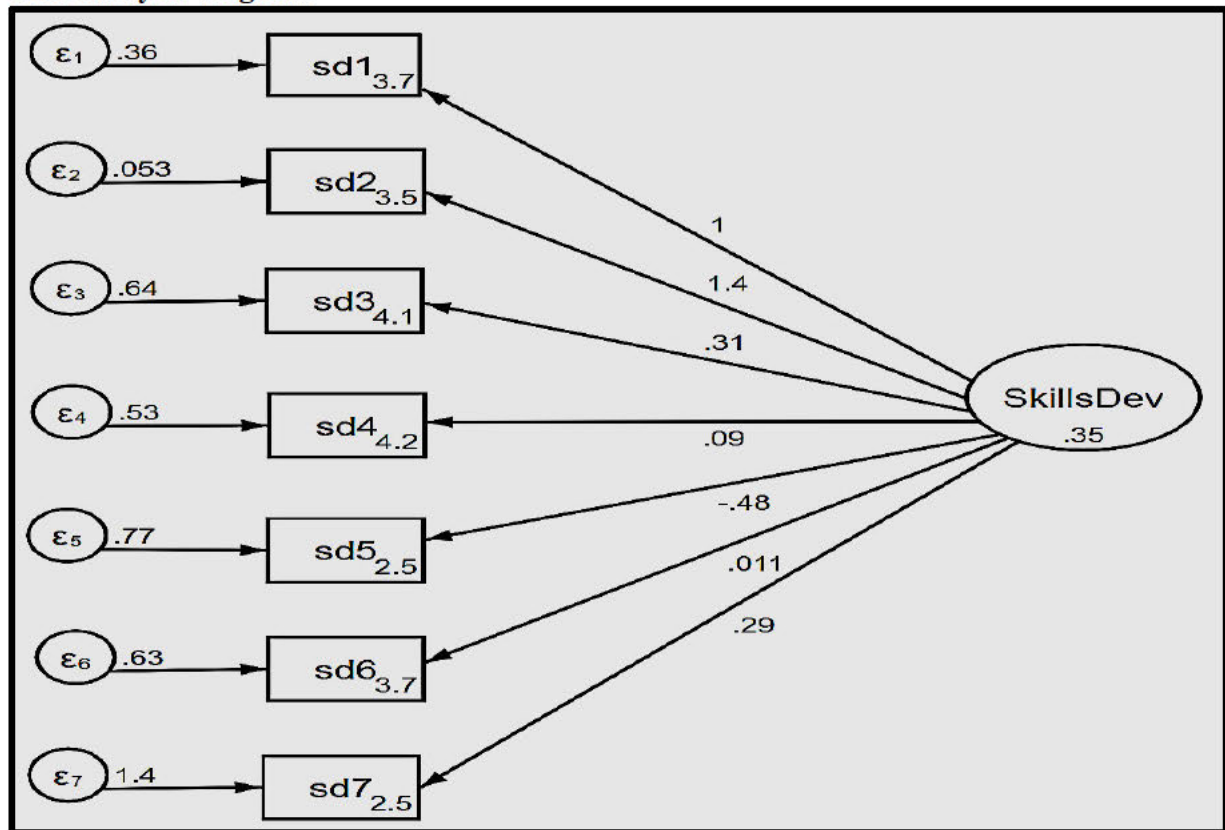


Figure 7.7: Path analysis diagram skills development

Source: STATA

Figure 7.7 is a path diagram illustrating the structural model for skills development. It can be noticed from the diagram that all the seven path coefficients were statistically significant and they also have a direct and positive relationship with skills development.

7.8.3 Factors influencing employee innovation in the manufacturing sector organisations in Zimbabwe

Table 7:33 shows the Goodness of fit test conducted on the employee innovation variable.

Table 7.33: Goodness of fit for employee innovation

Structural equation model			Number of obs		=		200	
Estimation method			= ml					
Log likelihood			= -853.48804					
(1) [ei1]EmpInnov = 1								
	OIM							
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]			
Measurement								
ei1								
EmpInnov	1	(constrained)						
_cons	3.498333	.0507352	68.95	0.000	3.398894	3.597772		
ei2								
EmpInnov	1.423768	.217906	6.53	0.000	.9966804	1.850856		
_cons	3.928	.0392948	99.96	0.000	3.850984	4.005016		
ei3								
EmpInnov	1.032017	.173312	5.95	0.000	.6923313	1.371702		
_cons	4.2875	.0382733	112.02	0.000	4.212486	4.362514		
ei4								
EmpInnov	1.152398	.1887394	6.11	0.000	.7824756	1.522321		
_cons	3.86375	.0415631	92.96	0.000	3.782288	3.945212		
ei5								
EmpInnov	.9521352	.2133454	4.46	0.000	.5339859	1.370284		
_cons	3.75	.0629484	59.57	0.000	3.626623	3.873377		
var(e.ei1)	.3924035	.0418383			.318403	.4836024		
var(e.ei2)	.0606795	.0192779			.0325547	.1131018		
var(e.ei3)	.1625964	.0191966			.1290078	.2049302		
var(e.ei4)	.1829371	.0225799			.1436277	.2330053		
var(e.ei5)	.6815291	.0707675			.5560307	.8353529		
var(EmpInnov)	.1224086	.0363476			.0684005	.2190608		
LR test of model vs. saturated: chi2(5) = 106.21, Prob > chi2 = 0.0000								

Source: STATA

The structural model was used to explore the factors influencing employee innovation. R^2 and path coefficients were used to assess the connectivity between dimensions (see Table 7.28). Five paths (factors) were hypothesised in the study. All five paths (factors) were found to be statistically significant, these are: ‘organisations consider employee innovation important for the development of the firm’ (ei1, $\beta = 3.498$, p-value = 0.000), ‘employees are a source of innovation in an organisation’ (ei2, $\beta = 3.928$, p-value = 0.000), ‘employees are motivated if their innovative ideas are implemented’ (ei3, $\beta = 4.2875$, p-value = 0.000), ‘employee’s innovativeness helps in problem-solving in an organisation’ (ei4, $\beta = 3.86375$, p-value = 0.000) and ‘top management support is important in achieving employee innovation’ (ei5, $\beta = 3.75$, p-value = 0.000). The most dominant factor is that ‘employees are motivated if their innovative ideas are implemented’ which has the highest beta coefficient (ei3, $\beta = 4.2875$, p-value = 0.000).

7.8.3.1 Goodness of fit for employee innovation factors

Table 7.34: Equation level skills development

Equation-level goodness of fit						
depvars	Variance			R-squared	mc	mc2
	fitted	predicted	residual			
observed						
ei1	.5148121	.1224086	.3924035	.2377734	.4876201	.2377734
ei2	.308816	.2481365	.0606795	.8035093	.8963868	.8035093
ei3	.2929687	.1303723	.1625964	.4450042	.6670863	.4450042
ei4	.3454984	.1625613	.1829371	.4705123	.685939	.4705123
ei5	.7925	.1109709	.6815291	.1400264	.374201	.1400264
overall				.8621546		
mc = correlation between depvar and its prediction						
mc2 = mc^2 is the Bentler-Raykov squared multiple correlation coefficient						

Source: STATA

The squared multiple correlation (R^2) shows the amount of variance in the endogenous variables that is explained by the latent variables that are connected to it (Diamantopoulos & Siguaw, 2000). In this case, latent factors ei1 to ei5 explained 86.21546% ($R^2 = .8621546$) of the variation in employee innovation among workers in the manufacturing sector in Zimbabwe. Table 7:34 presents the equation level goodness of fit for skills development.

Path analysis diagram

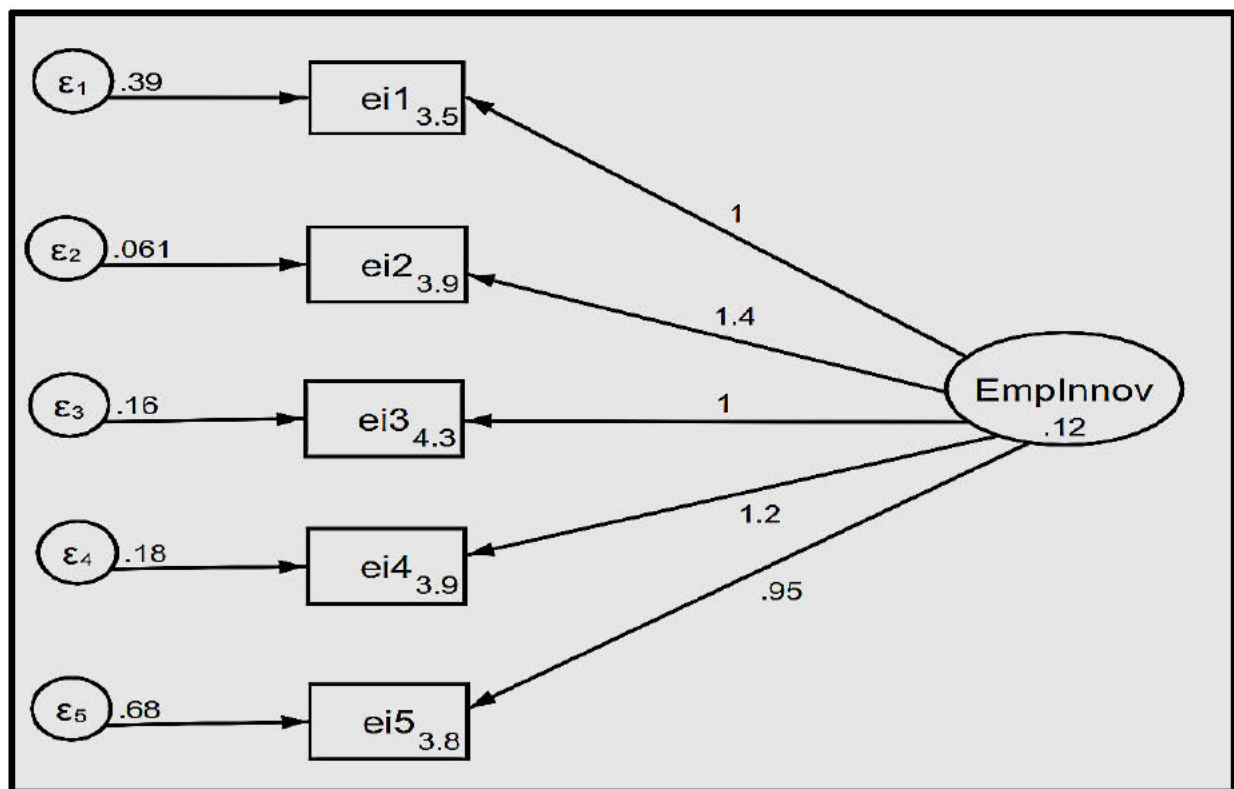


Figure 7.8: Path analysis diagram employee innovation

Source: STATA

Figure 7.8 displays the structural model for employee innovation. The model shows that five factors with positive statistically significant regression estimates make up employee innovation. The following section looks at the structural relationship between all the variables of this study.

7.8.4 Structural Model: Relationship between employee engagement and skills development and employee innovation

The structural model for the relationship between employee engagement, skills development and employee innovation is presented in Table 7.35.

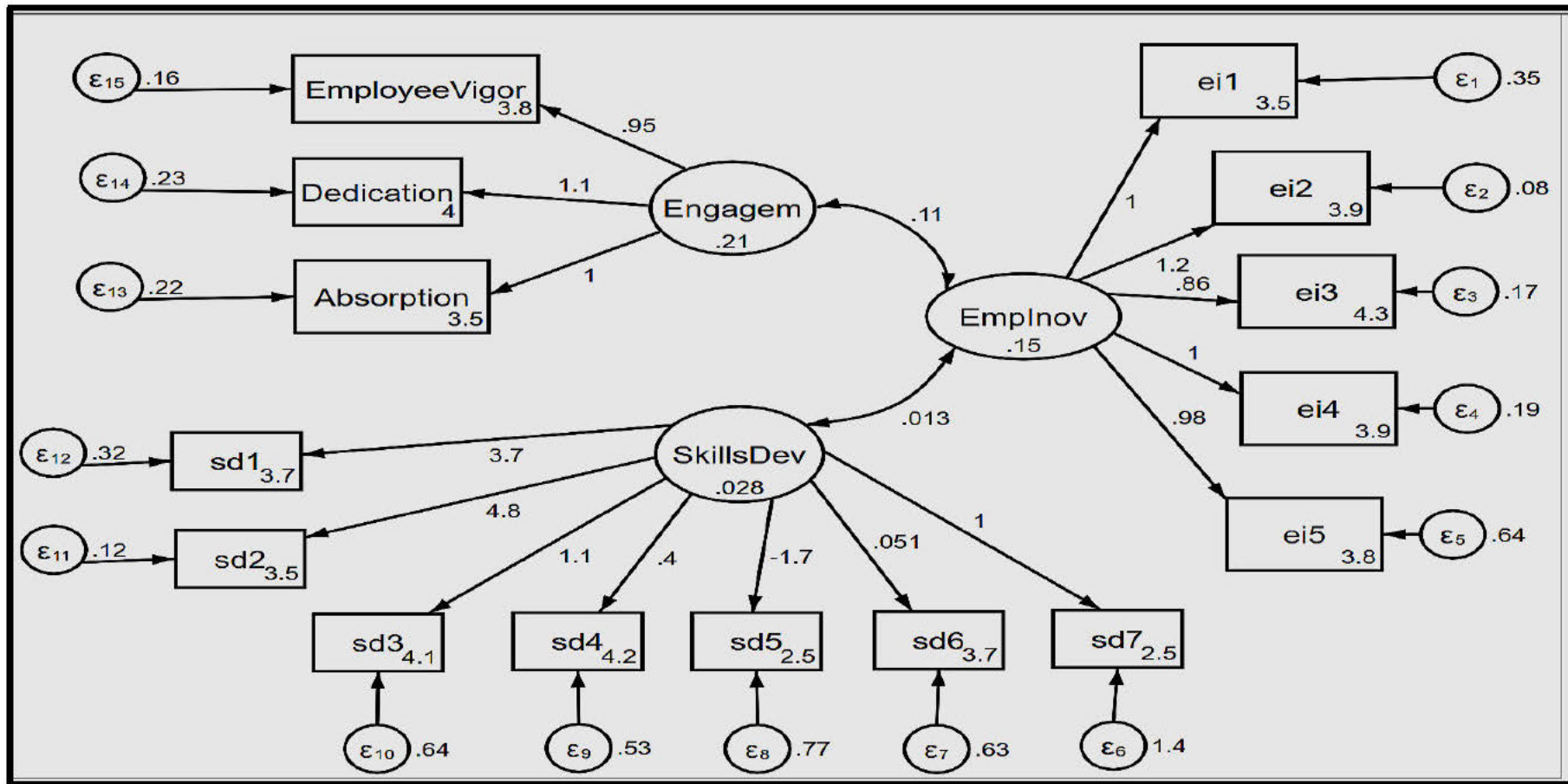
Table 7.35: Goodness of fit for employee engagement, skills development & employee innovation

		Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
Absorption	Engagem _cons	1	(constrained)				
		3.45245	.0467506	73.85	0.000	3.360821	3.544079
Dedication	Engagem _cons	1.091725	.1386447	7.87	0.000	.8199862	1.363463
		3.966	.049277	80.48	0.000	3.869419	4.062581
EmployeeVigor	Engagem _cons	.9529644	.1184091	8.05	0.000	.7208868	1.185042
		3.78015	.0419186	90.18	0.000	3.697991	3.862309
sd7	SkillsDev _cons	1	(constrained)				
		2.49	.0836631	29.76	0.000	2.326023	2.653977
sd6	SkillsDev _cons	.0506468	.3604792	0.14	0.888	-.6558795	.757173
		3.6725	.0559685	65.62	0.000	3.562804	3.782196
sd5	SkillsDev _cons	-1.690909	.9803112	-1.72	0.085	-3.612284	.2304656
		2.45	.065192	37.58	0.000	2.322226	2.577774
sd4	SkillsDev _cons	.3968978	.4103591	0.97	0.333	-.4073912	1.201187
		4.1525	.0516233	80.44	0.000	4.05132	4.25368
sd3	SkillsDev _cons	1.141958	.7258688	1.57	0.116	-.2807192	2.564634
		4.1025	.0580191	70.71	0.000	3.988785	4.216215
sd2	SkillsDev _cons	4.776931	2.5431	1.88	0.060	-.2074523	9.761315
		3.49125	.0616956	56.59	0.000	3.370329	3.612171
sd1	SkillsDev _cons	3.715891	2.053095	1.81	0.070	-.3081025	7.739884
		3.745	.0594523	62.99	0.000	3.628476	3.861524
ei1	EmpInov _cons	1	(constrained)				
		3.498333	.0502605	69.60	0.000	3.399825	3.596842
ei2	EmpInov _cons	1.194794	.1781514	6.71	0.000	.8456231	1.543964
		3.928	.038414	102.25	0.000	3.85271	4.00329
ei3	EmpInov _cons	.859912	.1462205	5.88	0.000	.5733251	1.146499
		4.2875	.0378073	113.40	0.000	4.213399	4.361601
ei4	EmpInov _cons	1.000139	.1578558	6.34	0.000	.690747	1.30953
		3.86375	.0409821	94.28	0.000	3.783427	3.944073
ei5	EmpInov _cons	.9839988	.1823539	5.40	0.000	.6265917	1.341406
		3.75	.0625786	59.92	0.000	3.627348	3.872652
	var (Engagem)	.2121692	.0430301			.1425772	.3157291
	var (SkillsDev)	.0280454	.0299906			.0034484	.2280875
	var (EmpInov)	.1507262	.0401343			.0894411	.2540041
	cov (Engagem, EmpInov)	.111581	.0254481	4.38	0.000	.0617035	.1614584
	cov (SkillsDev, EmpInov)	.0133889	.0090475	1.48	0.139	-.0043439	.0311217

Source: STATA

Table 7.35 shows the structural model results of the influence of employee engagement and skills development on employee innovation. The results indicated that employee engagement and skills development have a positive influence on employee innovation among the workers. Among these determinants of employee innovation, employee engagement $\beta = 0.111581$ (p-value = 0.000) was found to have a direct impact ($p < 0.05$) on employee innovation among the workers. Also, skills development $\beta = 0.0133885$ (p-value = 0.139) was found to be weakly but positively associated ($p > 0.05$) with employee innovation. This study therefore concludes that the dimension employee engagement has a direct influence on employee innovation with path coefficients being positive and significant. On the other hand, the path for skills development was positive although weak. These results emphasise the importance of employee engagement and skills development in embracing employee innovation in manufacturing organisations in Zimbabwe. Figure 7.9 shows the path analysis diagram depicting the relationships between employee engagement, skills development and employee innovation.

Path analysis diagram



Source: STATA

Figure 7.9: Path analysis diagram employee engagement, skills development & employee innovation

Figure 7.9 depicts the resultant structural model for the main research question of the study that is on whether or not employee engagement and skills development influence employee innovation. From the resultant model it can be noticed that both employee engagement and skills development have positive and direct influence on employee innovation. Further, the regression estimates shown in the path diagram also show positive relations between the two independent variables (employee engagement and skills development with the depended variable (employee innovation). The ensuing section provides additional explanation of the relationship between the variables using the goodness of fit measure.

7.9 Correlation analysis: Relationship between employee engagement, skills development and employee innovation

Correlation is a bivariate statistical analysis that establishes the strength of a link between two variables and the mode of the relationship (Weaver, Morales, Dunn, Godde, & Weaver, 2017). Multi-collinearity is “a phenomenon in which a predictor variable in a multiple regression model can be linearly predicted from the other variables with a substantial degree of accuracy” (Daoud, 2017: 1). Multi-collinearity and correlation test analyses confirm the suitability of the dataset being analysed. The Pearson correlation coefficient method (r) was tested to establish variable connection and the conclusion of the connection between each independent variable and dependent variable was drawn at 95 per cent interval of confidence and based on the 5 per cent point of importance (2-tailed). Relating to the strength of variable relationships, a strength of $-1 < r < +1$, with a value of ± 1 indicate a perfect degree of association between the two variables (Weaver *et al.*, 2017). Table 7.36 shows the relationship between the employee engagement variables: vigour, dedication and absorption employee engagement variables.

Table 7.36 Correlation results showing the relationship between vigour, dedication and absorption

		Employee Vigour	Employee Dedication	Employee Absorption
Employee Vigour	Pearson Correlation	1		
	Sig. (2-tailed)			
Employee Dedication	Pearson Correlation	.545**	1	
	Sig. (2-tailed)	.000		
Employee Absorption	Pearson Correlation	.515**	.490**	1
	Sig. (2-tailed)	.000	.000	
**. Correlation is significant at the 0.01 level (2-tailed).				

Source SPSS Version 26

Table 7.36 displays the correlation results between the employee engagement variables. The results obtained indicate that employee vigour, dedication and absorption moderately correlate. Employee vigour moderately correlated with employee dedication ($r=0.545$, $p<0.05$) while vigour and absorption also correlated ($r=0.515$, $p<0.05$). The results also showed a moderate correlation between employee dedication and absorption ($r=0.490$, $p<0.05$). Table 7.37 shows the results of the correlation analysis between employee engagement, skills development and employee innovation.

Table 7.37: Correlations results showing the relationship between employee engagement and skills development and employee innovation

		Skills Development	Employee Innovation	Engagement
Skills Development	Pearson Correlation	1	.448**	.398**
	Sig. (2-tailed)		.000	.000
	N	200	200	200
Employee Innovation	Pearson Correlation	.448**	1	.567**
	Sig. (2-tailed)	.000		.000
	N	200	200	200
Engagement	Pearson Correlation	.398**	.567**	1
	Sig. (2-tailed)	.000	.000	
	N	200	200	200
**. Correlation is significant at the 0.01 level (2-tailed).				

Source: SPSS v.26

Table 7.37 shows a statistically significant positive correlation between employee skills development and employee innovation ($r=.448^{***}$, $p<0.01$). Skills development therefore provides a significant contribution towards employee innovation. Table 7.36 also shows that there is a positive association between employee engagement and employee innovation ($r=.567^{***}$, $p<0.01$). This means that effective employee engagement will lead to innovation in an organisation.

7.10 The influence of biographical profiles on employee engagement, skills development, and employee innovation in manufacturing organisations in Zimbabwe

Further analysis of the impact of biographical profiles on employee engagement, skills development, and employee innovation in manufacturing organisations in Zimbabwe was done by computing the Pearson's Chi-square test. The intention was to establish whether or not the opinions about employee engagement, skills development, and employee innovation from the employees in manufacturing sector differed with respect to their demographic profiles. It was apparent that there was statistically insignificant evidence (p-values less than 0.05) that member category responses to the dimensions concerning employee engagement, skills development, and employee innovation differed depending on the demographic profiles including gender, age, education, marital status, years in service and position in organisation. The trend was similar in all factors except the position in an organisation which was found to be significant on embracing employee innovation ($X^2 = 147$, p value of $p = 0.003$ is less than 0.05). Table 7.37, 7.38 and 7.39 show that the distribution of responses varies considerably between the categories.

Table 7.38: Chi-Square Tests for demographic factors and employee engagement

Demographic Variable	Pearson Chi-Square			Comment
	Value	Df	Asym. Sign (2-sided)	
Gender	35.804	42	0.739	Insignificant
Age	149.441	126	0.076	Insignificant
Education	133.473	168	0.977	Insignificant
Marital Status	107.252	126	0.885	Insignificant
Rears of Experience	158.317	168	0.692	Insignificant
Position in an Organisation	129.605	126	0.395	Insignificant

Source: SPSS v.26

Table 7.38 shows the results of the Chi-Square tests performed on the relationship between demographic factors and employee engagement. The results of the tests indicated statistical insignificant relationships (p-values higher than 0.05) between employee engagement and the demographic factors. Table 7.38 provides Chi-Square test results for the relationship between demographic factors and skills development.

Table 7.39: Chi-Square Tests for demographic factors and skills development

Demographic Variable	Pearson Chi-Square			Comment
	Value	Df	Asym. Sig (2-sided)	
Gender	68.915	60	0.201	Insignificant
Age	168.768	180	0.715	Insignificant
Education	234.106	240	0.595	Insignificant
Marital Status	164.054	180	0.797	Insignificant
Rears of Experience	216.631	240	0.898	Insignificant
Position in an Organisation	176.168	180	0.567	Insignificant

Source: SPSS v.26

The Chi-Square tests were also performed to show the degree of strength between the demographic characteristics and skills development. The results displayed in Table 7.38 also show statistical insignificant relationships (p-values higher than 0.05) between demographic factors and skills development. The next section focuses on the relationship between demographic factors and employee innovation.

Table 7.40: Chi-Square Tests for demographic factors and employee innovation

Demographic Variable	Pearson Chi-Square			Comment
	Value	Df	Asym. Sig (2-sided)	
Gender	47.989	49	0.514	Insignificant
Age	144.614	147	0.54	Insignificant
Education	190.557	196	0.596	Insignificant
Marital Status	115.911	147	0.973	Insignificant
Years of Experience	202.764	196	0.355	Insignificant
Position in an organisation	198.064	147	0.003	Significant

Source: SPSS v.26

As indicated in Table 7.39 the Chi-Square tests were also done to determine the correlation between the demographic factors and employee innovation. The results showed statistical insignificant (p-values higher than 0.05) relations between all the other demographic factors except for position in the organisation which had a statistically significant correlation (p-values less than 0.05: $p = 0.003$).

After the above presentation of the research results, the next section of the study focused on the analysing and discussing these findings in relation to previous theoretical submissions.

7.11 ANALYSIS AND DISCUSSION OF RESULTS

The present study examined the influence of employee engagement and skills development in achieving employee innovation through the lenses of the SET, HCT and CTC theories presented in Chapter 2. The study integrated these theories to develop a model that provides

clarity on the relationships pertaining to the study variables. While the study used the three different theories to explain the research variables it might be the first to empirically test these theories in coming up with the proposed model. The following section therefore discusses the findings of the study variables and their relationships as specified in the conceptualisation stage.

7.11.1 Factors influencing employee engagement in organisations in the manufacturing sector in Zimbabwe

The concept of employee engagement was measured using the UWES. The scale measures three dimensions of employee engagement which are vigour, dedication and absorption. From the CFA conducted in the current study, the results show significant loading of the extracted constructs with $p < 0.001$ recorded for employee engagement measurement items. This endorses the suitability of the vigour, dedication and absorption validity in explaining their relationship with the latent construct (employee engagement). These three factors have positive beta coefficients towards employee engagement (vigour 3.780, dedication 3.966 and absorption 3.452). The results suggest that the theoretical three factor structure of the UWES (dedication, vigour and absorption) fits the data well (see Table 7.30).

Other studies have also been conducted to test the factor structure of the UWES. In a study by Hallberg & Schaufeli, (2006) in a Swedish sample comprising 186 information technology consultants the results confirmed that the three-factor structure vigour, dedication and absorption empirically supported the data excellently. In another study with a sample of 9404 Finnish employees in various occupations, Seppälä *et al.*, (2009) found the three subscales of employee engagement highly correlated and fitting the data well. The results of these studies are consistent with the current study in which the factors of vigour, dedication and absorption are empirically supporting the data. In this study, these three factors also correlated thus they fitted the data excellently. In a cross-cultural study of students in Netherlands, Spain and Portugal the results of the study confirmed factorial validity of the three sub-factors of employee engagement. In these studies, absorption and dedication were invariant in all the three countries whilst vigour was invariant in two of the samples. In this study, the three factors were found to fit the data excellently.

On the other hand, criticism has also been levelled at the factor structure of the measuring instrument (UWES). Shirom (2003) has claimed that the three-factor employee engagement, vigour, dedication, and absorption were not theoretically deduced and that they overlap each

other conceptually. Kulikowski (2017) points out that the three subscales of engagement vigour, dedication and absorption are closely related to each other thus casting doubt on the use of the three-factor structure but rather combining the factors to be one. In this study, the three factors were supported by the SET which upholds the principle of reciprocity. Figure 7.6 indicates that employee engagement factors have a direct and positive relationship with employee engagement thus they were able to measure what they were supposed to measure. Using the Pearson correlation, the three factors were moderately related as depicted by their significance levels found between 30 and 70% (0.545; 0.515 & 0.490). Thus, the three variables were not strongly related affecting their use in the study. Different study results on these three factors suggest that further studies should be conducted to ascertain their relationship.

7.11.2 Factors influencing skills development of employees in the manufacturing sector in Zimbabwe

Exploratory factor analysis with varimax rotation was conducted to determine the principal component factors influencing skills development. Varimax rotation is a statistical technique used at one level of factor analysis to elucidate the relationships among variable factors (Abdi, 2003). The KMO test of sampling adequacy and the Bartlett's test of sphericity were conducted to measure whether or not data collected was appropriate for EFA. From the factor analysis, seven critical components factors were deduced from twenty-five dimensions on the research instrument. Results confirms the suitability and validity of the seven factors (see Table 7.32). These factors are all significant in explaining their relationship with the latent construct (skills development) since they have positive β coefficients and p-values ($p > |z|$) which are less than 0.05.

The factor 'workers should have important qualifications for their jobs' was also extracted in this study. The results indicated that the relationship was significant at (sd3, $\beta = 4.1025$ $P < 0.01$). Qualifications are regarded as an important factor in determining employee effectiveness. Jaoko (2014) highlights that employees who are academically qualified for a given task will do whatever it takes to accomplish set performance goals and increase organisational performance. Similarly, Gordon & Miller (2012) express the view that employees with exceptional academic accomplishments are more able to perform better at the workplace just like they did in university. Therefore, professional jobs should also look at academic accomplishments as a necessary condition for employment. The findings from the present study are consistent with previous research. For example, Jaoko (2014) found academic qualifications positively related to job performance as was indicated by an average mean of

3.5415. In addition, the study by Jaoko (2014) suggested that academic qualifications are a vital factor in job designation of tasks and duties done by employees because the more an individual is academically qualified, the better the employee performance on the job. Therefore, organisations need to support and encourage their employees to pursue higher academic qualifications so that they strengthen the organisation's capacity to improve performance.

Organisational training motivates employees to improve their work processes is another factor identified in this study ($\beta = 4.1525$ $P < 0.01$). The aim of any training programme is to improve employees to achieve the requirements for the optimum profit potential. Likewise, Pillay, Dawood & Karodia, (2015) maintain that the objective of any training programme is to provide employees with requisite skills needed for making decisions and to achieve their daily work tasks. Previous studies confirm the results obtained in this study. For example, Khan (2012) found that a positive relationship exists between training and motivation to perform. The study concluded that organisations with good training plans enhance the performance of their employees as it motivates them to achieve higher performance levels (Khan, 2012). Similarly, Motlokoa, Sekantsi & Monyolo (2018) on the effect of training on employee performance in the banking sector in Lesotho showed that training positively impacts on an employee's motivation apart from improving his or her performance. According to them training leads to improved performance by sharpening the skills, knowledge and competencies of employees. The findings of this research were also confirmed by Momanyi, Adoyo, Mwangi & Mokua (2016) who performed a cross-sectional study on health workers to investigate 'the value of training on motivation among health workers in Kenya.' The results of their study found a significant statistically positive association between training and employee's motivation to work ($p\text{-value} = 0.013$). In another study, Łukasik (2017) found a significant association (83%) between internal training and motivation of employees to work in various small and medium-sized enterprise (SME) organisations in Europe. The discussion above therefore confirms that employee training is a significant factor that motivates staff to improve their work processes.

The findings of the current study on the extracted factor that organisations should provide free and up-to-date training facilities to enhance performance is in line with other studies. The Pearson Chi-square test findings revealed that there is a positively significant relationship between training facilities and training effectiveness ($\beta = 2.45$ $p < 0.01$). Likewise, Bhoganadam & Rao (2015) in their study on the influence of training facilities on training effectiveness in a manufacturing organisation in India found a positive association between the two variables. In

another study on the association between training facilities and benefits and compensation on employee retention in Thailand, the results found a positively significant correlation of 0.88 with a $p < 0.01$ (Kalyanamitra, Saengchai & Jernsittiparsert, 2020). In this regard, having up-to-date training facilities is imperative in that it leads to higher skills, knowledge, capabilities and positive behaviour in employees and to improved competitiveness of organisations (Tangthong, 2014).

The results of the present study revealed that it is important for government to subsidise employee skills development ($\beta = 2.49$, $p < 0.01$). Published literature confirmed that many governments have been funding skills development in their countries (Tshilongamulenzhe, 2012; Samuel, 2010). For example, Singapore has developed into one of the most industrialised nations mainly because of its investment in skills development. Singapore, through the Skills Development Framework (SDF), introduced the National Training Awards (NTA) that perform well in terms of employee development (Kuruvilla *et al.*, 2002). To date, the country has become a global centre for industry, finance and communication due to its strong focus on Human Resource Development (HRD) (Tshilongamulenzhe, 2012). Zimbabwe is also included among the countries that fund skills development through its manpower development fund. However, research notes that in Zimbabwe the fund is marked by corruption with funding being diverted elsewhere (Makombe, 2018). For example, in 2016 the SDF was channelled towards political campaigns (Makombe, 2018).

7.11.3 Factors influencing employee innovation in the manufacturing sector organisations in Zimbabwe

Structural equation modelling and exploratory factor analysis was conducted to determine the factors that influence employee innovation. The findings revealed that out of the twenty dimensions, only five principal components factors were extracted meaning that from the research instrument used, five factors influence employee innovation. All five principal component factors were found to be statistically significant (see table 7.34). These factors have positive beta coefficients and p-values which are less than 0.05. The most dominant factor is that employees are motivated if their innovative ideas are implemented which has the highest beta coefficient ($\beta = 4.2875$).

In the current study, the factor employees are motivated if their innovative ideas are implemented was most dominant ($\beta = 4.2875$). When employees apply their novel concepts and ideas they are motivated to innovate (Janssen, 2001). Employees are more innovative when

endowed with autonomy and authority to use their ideas and feel that they are part of the decision-making process in the organisation. Studies have revealed that employees may desist from contributing ideas to their colleagues and superiors due to a variety of reasons (Detert & Trevino, 2020). Within organisations, employees decide whether to share ideas or not with other organisational actors. Employees constantly decide on the choices by making personal judgements, thoughts, valuations, and decisions that have critical implications for organisational innovation (Sergeeva, 2015). Previous studies have revealed that the individual and contextual factors facilitate the motivation to innovate. Furnham, Crump, Batey & Chamorro-Premuzik (2009) found a positive association between innovation and personal factors, including expertise, intrinsic motivation, self-confidence, curiosity, personality types and intelligence. Therefore, it is important to comprehend the circumstances that encourage employee's inclination towards contributing to innovative ideas to other organisational actors (Sergeeva, 2015). Other researchers support the findings of this study and note that understanding employee orientation during the idea contribution process assists organisations in promoting innovation (Tangarila & Ramanujam, 2008).

Top management support contributes a significant role in producing desired organisational outcomes. Findings from this study on the factor analysis revealed that top management support as a factor is statistically significant in influencing employee innovation. The interaction between top management support and employee innovation has received considerable attention in the literature with researchers confirming that top management support influences employee innovation (Hill, Brandeau, Truelove & Lineback, 2014; De Jong & Hartog, 2007; Shaar, Khattab, Alkaied & Manna, 2015). Top management support is critical in generating innovation in employees by providing a supportive and conducive work environment. In their study on top management support influencing innovation, Shaar *et al.*, (2015) confirmed that top management support directly influences innovation ($p < 0.05$) when they provide a supportive climate for innovation such as financial support for training, making accurate decisions and development and promoting team-work. In another study by Hill *et al.*, (2014) on the leadership role in enhancing innovation in employees, it was concluded that innovative organisations require top management that abandons conventional management styles and leadership but rather creates ongoing innovation in organisations through developing innovation teams and forming relationships based on mutual trust. De Jong & Hartog (2007) on top management leadership behaviour also concluded that top management must be

accountable for establishing pioneering strategies that reinforce employee innovation. In other words, management has to be at the forefront in spearheading innovation in employees.

Another factor identified in this study is that of employees being a source innovation. Collins & Cooke (2013) highlight that employees are a critical asset to the organisation when they are inclined towards introducing new ideas. Researchers have confirmed that an individual's capacity to innovate may be a result of some individual characteristics. For example, Diehl, Seeck & Leppanen (2008) confirmed that individuals may be a source of innovation by naturally having a higher drive for innovation. Such individual traits may include autonomy to make their own decisions, openness to new experiences and having a firm sense of being innovative (Shalley, Zhou & Oldham, 2004).

Empirical evidence is supportive of the positive association between autonomy and innovation. The results confirmed that a direct causal relationship does exist between autonomy and innovation (Axtell, Holman, Unsworth, Wall, Waterson & Harrington., 2000; Shallet *et al.*, 2000). In another study, Ohly & Fritz (2007) on the relationship between personal initiative and the creativity and the innovation model by Amabile (1988), the results indicated that personal initiative promotes motivation and moderates the association of problem identification and preparation stage directly influencing innovation. In their study, Miron, Erez & Naveh (2004), on technicians and engineers from organisations manufacturing superior technologies, proposed that creativity and innovation are not adequate to achieve innovative outcomes, but personal initiative is needed to convert new ideas into practice.

The identified factor that organisations consider employee innovation important ($\beta = 3.498$) is also consistent with published literature. Cook (1998), for instance, revealed that creativity and innovation are important factors for competitive advantage. Cook (1998) added that organisations that develop a culture of innovation reap benefits beyond profits. Empirical evidence from different countries supports the view that innovation influence firm-level performance. The results of this study are in harmony with those of Rajapatharina & Hui (2018) in their study on the association between innovation capabilities, innovation type and firm performance in the Sri Lankan insurance industry. The findings of their study confirmed a significantly strong relationship between innovation capabilities, innovation type and firm performance ($p < 0.05$). Mai *et al.*, (2019) found that organisations that support employee innovation are consistently making profits ahead of those that don't as they have employees

with better internal proficiencies that come up with several innovations over time thus gaining higher market share from competitors.

Another factor extracted is the acceptance that employee innovation solves problems in organisations ($\beta = 3.86375$, $p\text{-value} = 0.000$). Researchers highlight that although a service or product may be an outcome of the innovation process the innovation process is taken from the creative inputs of individuals (Apigico, Pallissier & Monteiro, 2009). Published literature confirm the findings of this research. According to a study by Hartel, Schmidt & Keyes (2003) engaged employees think outside of the box producing innovative ideas and are more receptive of new ideas than disengaged people. Their study concluded that engaged employees discover and propose new and better methods of improving their work processes thus fulfilling the assumption that when employees are creative and innovative it shows that they have a deeper understanding of the organisational processes, which enables them to identify, define and find solutions to organisational problems.

Ciit (2016) confirmed that innovative problem solving must be developed from within an organisation. Thus, a truly innovative organisation affords its employees opportunities to explore, fail and follow novel approaches. Other researchers confirmed this proposition by highlighting that in organisations that promote innovation failure is seen as part of challenging work and it is seen as the cost of being novel (Hutchinson-Krupat & Chao, 2014). Therefore, organisations should encourage employees to share their ideas which may be critical in solving problems the organisation might be facing.

7.11.4 The influence of employee engagement and skills development on employee innovation in Zimbabwe's manufacturing sector organisations

The results indicated that employee engagement significantly and positively influences employee innovation ($\beta = 0.111581$; $p\text{-value} = 0.000$), whilst skills development has weak but significant positive influence employee innovation ($\beta = 0.0133885$; $p\text{-value} = 0.139$). As shown in Table 7.36, multi-collinearity analysis was also performed on the study variables to confirm if relationships were significantly positive. The results showed that a positive association between employee engagement and employee innovation ($r = .567^{***}$, $p < 0.01$) and a statistically significant positive correlation between employee skills development and employee innovation ($r = .448^{***}$, $p < 0.01$). Thus, the results of multi-collinearity tests confirmed the SEM results.

The primary objective of this study was to determine the influence employee engagement and skills development had on employee innovation in Zimbabwe's manufacturing sector organisations. To determine this relationship SEM was conducted. The results of the study confirmed that employee engagement and skills development positively influence employee innovation. There is no available research that confirms the combined effects of employee engagement and skills development on employee innovation. As such, there is no model that exists in published literature especially in the Sub-Saharan African context that confirms the relationship between employee engagement, skills development and employee innovation. The results of this study therefore add on to the body literature surrounding the effect of the combined independent variables (employee engagement and skills development) of this study on the dependent variable (employee innovation).

There is dearth of published literature on the combined effects of employee engagement and skills development. The little that is there has mainly focused on this relationship with employee engagement acting as a moderating variable (Nawaz, Hassan, Hassan, Shaukat & Asadullah, 2014 & Karatepe, 2012). In a study done on the influence of skills development and empowerment on employee creativity and innovation through employee engagement, the results show that employee engagement moderately relates to employee innovation and human resource practices (Nawaz *et al.*, 2014).

Karatepe (2012) highlighted the importance of employee engagement in mediating between high-performance work practices (such as empowerment, rewards and training) and employee performance outcomes such innovative behaviour of employees. The results showed that when employees are treated well through the concurrent implementation of training and empowerment, employees display engaged behaviour, which results in better performance outcomes. Similarly, AbuKhalifeh *et al.*, (2013) found skills development as the major factor causing employee engagement which reflects positively on the overall performance of employees.

7.11.5 The relationship between employee engagement and employee innovation in organisations in the manufacturing sector of Zimbabwe

Research findings from SEM show that employee engagement $\beta = 0.111581$ (p-value = 0.000) was found to have a direct impact ($p < 0.05$) on employee innovation among these workers. This means that, *ceteris paribus*, employee innovation will improve by 11.1581% if there is 100% improvement in employee engagement. These results are significant at 95% confidence interval

($p < 0.05$). The Pearson's correlation also confirmed that there is positive association between employee engagement and employee innovation ($r = .567^{***}$, $p < 0.01$). This confirms that effective employee engagement leads to employee innovation in an organisation.

The results are consistent with literature on empirical relationship between employee engagement and employee innovation. Explaining the significance of employee engagement and innovation Maku (2014) found that employee engagement is an essential factor that influence employee innovation. These findings also concur with those of Anderson, Potočnik, & Zhou, (2014) who deduced that employee engagement, creativity and innovation are important causes of corporate performance, prosperity, and long-term survival. Yu (2013) discovered similar findings that engaged employees exhibit innovative behaviours and will include themselves in the generation of new ideas, procedures, products, processes or services. Likewise, Rao (2016) concluded that engaged employees are empowered to look for innovative ways including boosting profitability, enhancing customer experience, building a brand and improving quality.

Furthermore, Sundaray (2011) discovered the need for employees to exhibit flexibility, to work beyond the typical tasks, and to be innovative. Sundaray (2011) asserts that employee engagement is essential in retaining talented employees with unique proficiencies. Engaged employees are passionate about their jobs and will be fully immersed in their work. This results in ensuring employee innovation at the workplace (Sundaray, 2011). In their findings on the interaction between engagement and employee innovation, Ilyasa, Madhakomala & Ramly (2018) established that employee engagement positively influences employee innovativeness. Their findings agree with those of Gichohi (2010), who discovered that work engagement influences innovation and creativity in the workplace. Relatedly, in their study, Nawaz, *et al.*, (2014) found that when employees display engagement, they act in a certain way that enhances creativity and innovation.

7.11.6 The interplay between skills development and employee innovation in the manufacturing sector organisations in Zimbabwe

Results from SEM found that there is weak but positive association between skills development and employee innovation ($\beta = 0.0133885$, $p\text{-value} = 0.139$). The Pearson correlation also showed a statistically significant positive correlation between employee skills development and employee innovation ($r = .448^{***}$, $p < 0.01$). The results therefore confirm that skills development provides a significant contribution towards employee innovation.

The results concur with sentiments provided by other researchers including Bauernschuster *et al.*, (2009); Michaelis & Markham, (2017); and Fernandez & Pitts, (2011) who found that skills development leads to employee innovation. For instance, Bauernschuster, *et al.*, (2009) claim that employee innovation is useful in keeping up with the competitive environment specifically the technological front. Therefore, employee skills development proliferates an organisation's chances of coming up with different innovations. Michaelis & Markhma. (2017) state that skills development provides opportunities for organisations to develop an innovation-oriented culture composed of employees with innovation skills and a better comprehension of the organisation's investment in innovation. Fernandez & Pitts (2011) claim that employee development exposes employees to a plethora of ideas used as solutions to problems requiring innovative solutions.

Furthermore, empirical studies conducted on the relationship between skills development and employee innovation confirm the results obtained in this study. For example, in their study on small to medium enterprises Abdullah *et al.*, (2014) proved that employee skills development is a significant predictor of employee innovation. Their study also discovered employee skills development to be a significant predictor of employee innovation dimensions such as idea generation, idea exploration, idea implementation and idea promotion. In another study, Bauernschuster *et al.*, (2009) found a statistically positive relationship between organisational sponsored skills development and employee innovation. In their study in German, a ten percent increase in employee skills development intensity led to a ten percent increase in propensity to innovate.

7.11.7 The influence of biographical profiles on employee engagement, skills development and employee innovation in manufacturing organisations in Zimbabwe

The study measured the influence of biographical profiles on employee engagement, skills development and employee innovation using the Pearson's Chi-square test statistic after cross tabulation. The findings from the study indicated that there was statistically significant evidence of p-values of greater than 0.05 for the majority of biographical profiles including gender, age, education, marital status, years in service except for position in the organisation which was found to be insignificant on embracing employee innovation ($X^2 = 147$, p value of $p = 0.003$ is less than 0.05). The section below discusses the relationships between demographic profiles and the variables of the study. The discussion will commence with the discussion of demographic profiles with employee engagement before moving on to skills development and employee innovation.

Tables 7.37, 7.38 and 7.39 show the results of the relationships on demographic profiles of this study with employee engagement, skills development and employee innovation. The results show insignificant relationships with the majority of the demographic profiles except for the relationship between positions in the organisation with employee innovation. The relationship between position in the organisation and employee innovation can be looked at from the subordinate or leadership perspectives.

From the leadership perspective, literature suggests that innovative leaders stimulate innovation (Bulinska-Stangrecka, 2018 & Lesáková, Gundová, Král', & Ondrušová, 2017). Researchers have stated this as one of the characteristics of innovative leaders. Nawrat (2013) states that innovative leaders are characterised by openness, they solve problems creatively and easily adapt to change. In a study by Nadolna (2020) on the duties of a leader in encouraging innovation in subordinates, the results confirmed that the role of a leader is to stimulate creativity and innovation in his or her employees. The results of the study by Nadolna (2020) revealed that most statements about the duties of leadership achieved a mean score above 5.0 (86%) which is at an average level. The study suggested that leaders must be at the forefront of being innovative themselves and at the same time encourage rewarding the innovative behaviour of employees to motivate innovation among employees.

7.12 Chapter Summary

This chapter saw the presentation and discussion of the findings from an empirical point of view. The chapter presented demographic findings first before looking at descriptive and inferential statistics. Empirical tests such as the factor analysis, structural equation modelling, Pearson's Chi-square test were performed to answer the research objectives of the study. The findings from the empirical tests were also discussed in line with other published material related to the present study. The following chapter provides a recap of research objectives, a summary of study chapters, and the main results of the empirical tests performed in this study.

CHAPTER EIGHT

SUMMARY OF FINDINGS, CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

8.1 Chapter Introduction

Following the data presentation, interpretation and discussion of findings from the preceding chapter, this chapter presents a summary of the chapters, main research findings, research contributions and managerial implications. Suggestions for future research and limitations of the study are also provided at the end of the chapter.

8.2 Recapitulation of the research objectives and research questions

This section of the chapter presents the recapitulation of the objectives and research questions. The main objective of the study was to determine the relationship between employee engagement, skills development and employee innovation. From this broad objective, sub-objectives were also determined. Table 8.1 presents the recapitulation of the study objectives and questions.

Table 8.1: Recapitulation of the study objectives and questions

	Research Objectives	Research Questions
1.	The primary objective of the study was to investigate the influence of employee engagement and skills development on employee innovation in Zimbabwe's manufacturing sector organisations.	To what extent can the integration of employee engagement and skills development lead to employee innovation in the manufacturing sector in Zimbabwe?
2.	To determine the factors influencing employee engagement in organisations in the manufacturing sector in Zimbabwe.	What are the factors influencing employee engagement in the manufacturing sector in Zimbabwe?
3.	To examine the factors influencing skills development of employees in the manufacturing sector in Zimbabwe.	What are the factors impacting employee skills development in the manufacturing organisations in Zimbabwe?
4.	To determine the factors influencing employee innovation in the manufacturing sector organisations in Zimbabwe.	Which factors are influencing employee innovation in manufacturing organisations in Zimbabwe?
5.	To examine the relationship between employee engagement and employee innovation in organisations in the manufacturing sector of Zimbabwe.	What is the effect of employee engagement on employee innovation amongst organisations in the manufacturing sector in Zimbabwe?

6.	To investigate the interplay between skills development and employee innovation in the manufacturing sector organisations in Zimbabwe.	What is the impact of skills development on employee innovation in the manufacturing sector organisations in Zimbabwe?
7.	To determine the influence of biographical profiles on employee engagement, skills development and employee innovation in the manufacturing organisations in Zimbabwe.	What influence do biographical profiles have on employee engagement, skills development and employee innovation related to the manufacturing sector organisations in Zimbabwe?

The above table provides a recapitulation of the research objectives and research questions of the study. The following section provides a summary of chapters of the study.

8.3 Summary of chapters

The section below presents a summary of each chapter found in this thesis:

Chapter 1: this chapter presented an overview of the study. The chapter provided a background to the study and stated the research problem. An outline of the research objectives and questions was also provided with the primary objective of the study being to investigate the influence of employee engagement and skills development on employee innovation in Zimbabwe's manufacturing sector organisations. The sub-objectives looked at confirming if relationships do exist between each independent variable (employee engagement & skills development) and the dependent variable (employee innovation) of the study. The last objective sought to determine if demographic characteristics influenced any of the research variables. Also discussed in the chapter is the contribution the research was to make to both the industry and academia at large. This chapter laid the foundation for all the other ensuing chapters.

Chapter 2: This chapter focused on the concept of employee engagement. The chapter preceded with a discussion of the evolution and the meaning of the concept. In the chapter it was stated that the research adopts the definition by Schaufeli *et al.*, (2002) as it is the widely used and cited definition of employee engagement. The authors define employee engagement as 'fulfilling positive work-related state of mind that is characterised by dedication, vigour and absorption.' Factors influencing employee engagement were also discussed. Amongst these factors were individual factors as well as organisational factors. The chapter also discussed already existing measurement scales of employee engagement. Of the various measurement scales discussed, the Utrecht Work Engagement Scale was adopted. The scale was adopted because it is the most widely used scale in employee engagement circles because of its

usefulness in measuring the three important dimensions of engagement including vigour, dedication and absorption. The chapter concluded with a discussion of the outcomes of employee engagement which included profitability, in role performance, superior and quality products, and employee innovation.

Chapter 3: In this chapter, an overview of the concept of skills development was presented. The chapter first presented the meaning of skills development. A global view of the skills development landscape was then provided. Skills development in countries such as Singapore, India and Denmark were discussed before looking at Zimbabwe. Subsequently, the factors that influence skills development were explored. Among these factors is the influence of globalisation, technological change and an ageing workforce. Reasons for employee skills development were discussed and employee innovation relative to skills development was also discussed in this chapter. The chapter reasoned that employee innovativeness is influenced by levels of knowledge, skills and competences that employees possess. Therefore, to survive the ever-changing market conditions organisations need to invest heavily in developing the skills of their employees if ever they are to remain competitive through innovation.

Chapter 4: This chapter reviewed literature on the concept of employee innovation. The chapter began with an understanding of the concept. After reviewing numerous definitions, the chapter described employee innovation as the successful acceptance and execution of employee-generated ideas by a business entity. Factors that influenced employee innovation were then discussed. Some of the factors discussed included the influence of communication, reward systems, supportive work environment amongst others. A discussion of the relationship between demographics characteristics and employee innovation was also presented before looking at the outcomes of the concept. Some of the outcomes discussed included profitability, quality and superior products and in-role performance. The state of employee innovation in Zimbabwe was discussed with the study highlighting that deindustrialisation has been experienced in the country. Therefore, more needs to be done with regard to employee innovation if the country is to remain competitive.

Chapter 5: This chapter presented the theoretical underpinnings guiding this study. In this study, three different theories were adopted to guide three different variables viz. employee engagement, skills development and employee innovation. The study adopted the Social Exchange Theory to explain the concept of employee engagement. The Human Capital Theory, which emphasises the need for investment in employees, was adopted to explain the concept

of skills development while the Componential Theory of Creativity was used to guide the concept of employee innovation. The study sought to validate whether the integration of employee engagement and skills development was to give rise to employee innovation or not. The study provided an overview of each theory before providing the rationale for adopting the theory and its limitations. In effect, this chapter contributed to answering the main research question and all the sub-questions pertaining to the three variables of the study (sub-questions 1 to 5). The study findings validated the adoption of the SET, HCT and CTC as the guiding theories for this research. The results strengthen the use of SET in predicting employee engagement in a hypothesised relationship with employee innovation. The basic premise of the SET is that when employee expectations are met, it follows that employer outcomes of employee engagement are also achieved. Figure 7.6 indicates that employee engagement factors have direct but positive relationship with employee engagement as shown in the path diagram and regression estimates. This therefore, means that when employers provide the right circumstances for engagement, employees reciprocate with desirable positive organisational outcomes such as employee innovation.

Relatedly, the study strengthens the use of the HCT theory in predicting the effects of skills development on employees. Descriptive statistics for skills development (Table 7.19) showed an average mean score of above meaning that employees are somewhat agreeing that given the right conditions for skills development employees will improve their work processes including employee innovation. Also, the study advances the use of the CTC theory in explaining employee innovation. As shown by the descriptive statistics in Figure 7.24, the results denote that employees are agreeing to employee innovation items. Thus, the results strengthen the use of CTC theory.

Chapter 6: This chapter discussed the research design and methodology followed by the study. Guided by the positivist research paradigm, the study adopted a quantitative research approach. Primary data were collected from a sample of 335 participants from five different organisations in the manufacturing sector in Zimbabwe. The sampling technique procedure was also discussed. An overview of how data were to be presented, interpreted and analysed is also provided in the chapter. To analyse the data the study made use of statistical analysis software's SPSS and STATA. The pertinent issues discussed in this chapter provided an overview of how the ensuing chapter was to be presented.

Chapter 7: To achieve the objectives of the study discussed in chapter one, this chapter adopted a logical approach in using statistical techniques in answering the research questions. To answer the research questions, the study performed CFA and SEM. The findings of the study revealed that the three measured components of employee engagement: absorption, dedication and vigour were indeed suitable to measure employee engagement. CFA was also conducted on skills development and employee innovation to determine the suitability of the factors measuring these concepts. SEM was also conducted to answer the main research question and sub-questions except the one on the relationship between biographical characteristics and the variables of the study. The results from SEM confirmed statistically significant positive relationships between the independent variables and dependent variable of the study. Path analysis diagrams were also drawn to confirm the research model. Bivariate correlation analysis was also performed to confirm the relationships between the research variables. The findings also revealed statistically significant positive relationships. To answer the research question on the relationship between the biographical profiles and the research variables the Pearson Chi-square test was performed. The results revealed that statistically significant positive relationships existed for all other demographic profiles except for level of position in the organisation which had an insignificant relationship with employee innovation.

Chapter 8: The last chapter of the thesis outlines the main research findings and the conclusions drawn from it. The chapter provides a summary of each chapter before providing a summary of the research findings. An overview of the contribution of the study is also given. Also outlined in the chapter are the practical and managerial implications to the manufacturing industry in Zimbabwe. Limitations and suggestions for future research conclude the chapter.

8.4 Summary of the results and conclusions

The present study focused on determining the relationships between employee engagement, skills development and employee innovation. A summary of the results on the relationships between these three main variables is provided in this section. Also outlined in this chapter is a summary of the results on the relationship between the demographic characteristics and the research variables.

Pertaining to the relationship between the research variables, the results of the SEM tests will be summarised. The Pearson Chi-square tests performed on the demographic characteristics and the research variables are also summarised. The summary of findings are presented in accordance with the research questions. Below is a summary of the findings:

Research question 1: To what extent can the integration of employee engagement and skills development lead to employee innovation in the manufacturing sector in Zimbabwe?

To address this research question, SEM and multiple regression analyses were performed. The results of the SEM confirmed that employee engagement and skills development positively influenced employee innovation. Employee engagement $\beta = 0.111581$ (p-value = 0.000) had positive direct influence on employee innovation. Concerning skills development, the results confirmed a positive but weak relationship $\beta = 0.0133885$ (p-value = 0.139) with employee innovation. Thus, the results confirm the model that employee engagement and skills development have an influence on employee innovation. The path analysis diagram below summarises the model.

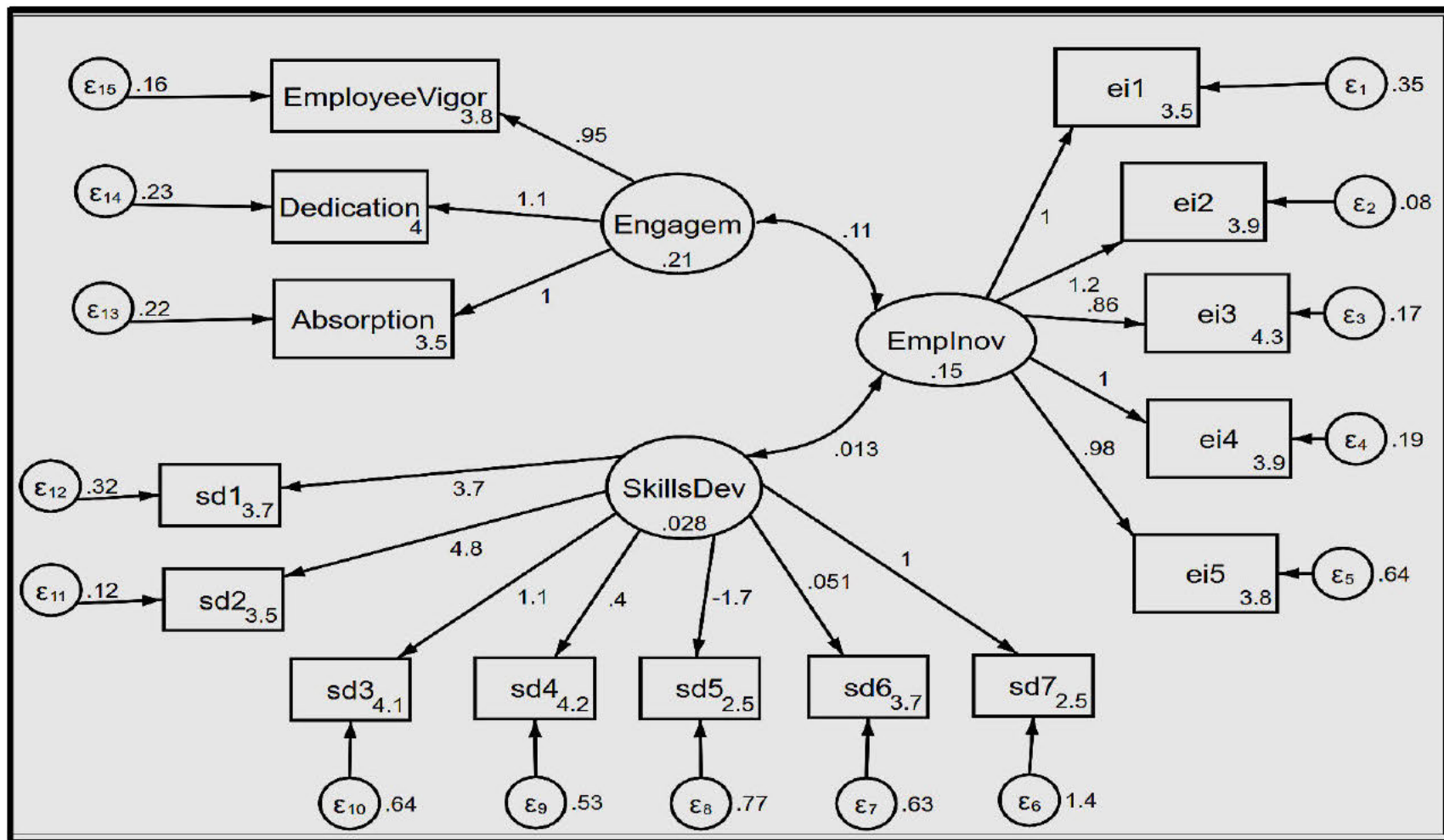


Figure 8.1: Path analysis summary model

Source: STATA

Multiple regression analysis was also conducted to ascertain the relationship between the independent variables (employee engagement & skills development) with the dependent variable (skills development). Again, the results confirmed the model proposed in the study that employee engagement and skills development are significantly positively related to employee innovation. Employee engagement achieved a positive correlation ($r = .567^{***}$, $p < 0.01$) while skills development ($r = .448^{***}$, $p < 0.01$).

The results from SEM and multiple regression analysis conducted also address research questions 5 and 6.

Research question 5: What is the effect of employee engagement on employee innovation amongst organisations in the manufacturing sector in Zimbabwe?

Research question 6: What is the impact of skills development on employee innovation in the manufacturing sector organisations in Zimbabwe?

The outcome on the main research question and sub-questions 4 and 5 confirm the conceptual model proposed in the study which integrated three different theories to explain three different variables. Kamla Raj (2014) argues that when researchers' synthesises more than one theory or concepts in a theory or existing opinions in the literature regarding a given situation from both empirical and theoretical findings the integration may be called a conceptual framework or model. It is a result of integrating several related concepts to predict or explain a given situation. It is akin to the inductive process where individual concepts are joined together to tell a bigger picture of possible relationships (Kamal Raj, 2014).

Research question 2: What are the factors influencing employee engagement in the manufacturing sector in Zimbabwe?

In view of the above research question, SEM based CFA shows significant loading for construct with $p < 0.001$ recorded for employee engagement measurement items. This study found that the three components of employee engagement which are employee dedication, vigour, and absorption have positive coefficients towards employee engagement. The coefficients fitted as follows vigour: 3.780; dedication: 3.966; and absorption 3.452. The results showed that 76.6% ($R^2 = .766$) of the employee engagement is attributable to employee vigour, employee dedication and absorption parameters thus the econometric model explains 76.6% of the variations in the employee engagement or the exploratory power of the multiple structural equation model used.

Research question 3: What are the factors impacting on employee skills development in the manufacturing organisations in Zimbabwe?

To answer this research question, SEM with CFA was conducted. The results of the CFA showed suitability and validity of seven factors. The results of the seven factors explain a significant relationship with the latent variable skills development (p-values ($p > |z|$) less than 0.05). The confirmed seven factors included the organisation providing quality and relevant training for my job (sd1, $\beta = 3.745$ $P < 0.01$), organisations have training and development policy (sd2, $\beta = 3.491$ $P < 0.01$), Workers have important qualifications for their jobs (sd3, $\beta = 4.1025$ $P < 0.01$), organisational training motivates staff and improves the work process (sd4, $\beta = 4.1525$ $P < 0.01$), organisations should offer free and up-to-date training facilities (sd5, $\beta = 2.45$ $p < 0.01$), workers are eager to develop themselves by paying for training (sd6, $\beta = 3.6725$, $p < 0.01$) and the government subsidises trainingsd1, sd7, $\beta = 2.49$, $p < 0.01$).

The Goodness of fit test was conducted to ascertain the validity of the model. The R² indicates that about 93.55% ($R^2 = .9355482$) of the employee skills development was attributable to the seven parameters mentioned above. The results showed that the fitted SEM explains 93.55% of the variations in the employee skills development or the exploratory power of the multiple SEM used. Thus, the results of the tests performed confirm that from the measuring instrument used in the study the above-mentioned factors influence skills development.

Research question 4: Which factors are influencing employee innovation in manufacturing organisations in Zimbabwe?

The above research question was answered using SEM tests. CFA was used to determine the factors influencing employee innovation. The results found five factors to be statistically significant in explaining employee innovation. The five factors included organisations consider employee innovation important for the development of the firm (ei1, $\beta = 3.498$, p-value = 0.000), employees' are a source of innovation in an organisation (ei2, $\beta = 3.928$, p-value = 0.000), employees' are motivated if their innovative ideas are implemented (ei3, $\beta = 4.2875$, p-value = 0.000), employees' innovativeness helps in problem-solving in an organisation (ei4, $\beta = 3.86375$, p-value = 0.000) and top management support is important in achieving employee innovation ((ei5, $\beta = 3.75$, p-value = 0.000). The Goodness of fit test was also performed to determine the model fit. The latent factors explained 86.21546% ($R^2 = .8621546$) of the variation in employee innovation among workers in the manufacturing sector in Zimbabwe.

Research question 7: What influence do biographical profiles have on employee engagement, skills development and employee innovation in the manufacturing sector organisations in Zimbabwe?

The research question above was addressed by conducting the Pearson Chi-square tests after cross tabulation on the biographical characteristics. The results revealed that there were no statistically significant relationships between the biographical profiles and the three variables of the study (p-values less than 0.05). However, the biographical position in the organisation was the only one with a significant relationship with employee innovation ($\chi^2 = 147$, p value of $p = 0.003$ is less than 0.05).

8.5 Contribution of the study

The current study made the following theoretical and empirical contributions to the concepts of employee engagement, skills development and employee innovation. Tracy (2010), states that researchers need to make judgements concerning the impact of a study's contribution. In light of this, researchers need to review the current state of knowledge and practice asking questions on whether the study will improve practice or extend knowledge, or generate ongoing research. In this research, the conceptual model used in this study is unique in that it integrates three different theories to come up with a model explaining the relationship between three different variables. No such model is available in published literature within the context of a developing country such as Zimbabwe. The study therefore provides new knowledge and guidance on the empirical understanding of the relationships between the three variables investigated in the study. Also, this study advances new knowledge in the field of HRM as it empirically tested theory and provided new empirical evidence that confirms the relationships between the variables. employee engagement, skills development and employee innovation examined in the study. The empirical findings from this study are new, thus it represents a significant contribution to the already existing body of knowledge on practical solutions on how employee innovation may be improved in the manufacturing sector in Zimbabwe through employee engagement and skills development. No research has addressed the topic of employee innovation particularly in Zimbabwe. Most studies concerning the relationships between the variables of the study are largely from Asian and European countries (Nawaz *et al.*, 2014 & Karatepe, 2012). This thesis therefore advances knowledge regarding the practice of employee engagement, skills development and employee innovation from the Zimbabwean perspective. The following section presents the managerial implications of the present study.

8.6 Practical and managerial implications

Previous research provided theoretical contributions to comprehend the concepts of employee engagement, skills development and employee innovation as was done in this research. The resulting implications are therefore rare. The aim of having a broad theoretical analysis was to have a deeper understanding of the study variables in relation to the problem of limited employee innovation capacity being investigated. The results and recommendations made from this study can therefore be used by management in organisations to improve themselves through enhancing employee innovation and skills development in order to benefit from employee innovation which is lacking from the industry today. In this section of the study, pragmatic and managerial implications stemming from the study findings are presented. Below are the practical and managerial implications from the present study:

Organisations in Zimbabwe particularly the manufacturing sector are facing deindustrialisation challenges with employee innovation seen as a panacea to address the challenges. The results of this study have positive implications for management on how they can remain relevant by improving innovation. The present study concluded that employee engagement together with skills development influence employee innovation. Therefore, to realise employee innovation, management and policy makers in organisations particularly the manufacturing sector in Zimbabwe should put in place measures that stimulate employee engagement and ensure that an enabling environment exists that favours employee skills development. This is mainly because employee engagement and skills development have been confirmed in this study as critical ingredients necessary for achieving employee innovation.

With the significance of skills development having been confirmed by the results of the study and reiterated by the human capital theory, Management in organisations should understand that skills development is an ongoing process. Therefore, investment in continual upgrading of employee skills to keep abreast of the changes happening in the market environment is indispensable. Refresher courses, for example, are helpful as they keep employee skills from becoming obsolete.

There is need for management in organisations to determine what needs to be improved. Upon determining what is not working, management can encourage their employees to develop new innovative ideas that can help the organisation to remain competitive in the marketplace. Management should adopt an active approach in spearheading the innovation process as this not only motivates the employees but also impacts positively on the engagement levels of the

employees. The literature review has shown that rewards also influence employee innovation, therefore, managers must also incentivise employee innovation in their organisations to encourage employees to come up with and to implement new ideas.

8.7 Limitations of the study

In this study the relationship between employee engagement, skills development and employee innovation was examined. Like any other research the present research had its limitations which hindered its success as a research project. Below are some of the limitations which were encountered during the study:

- Several challenges were encountered during the course of this study which hindered progress. Firstly, the researcher encountered financial constraints. Several aspects of the study required funding. For instance, visiting different organisations which were geographically widely dispersed from one another. The researcher had to rely on his own limited funds to finance the research process. Universities should provide funding to researchers in order to improve research performance. Langfeldt, Bloch, & Sivertsen (2015) highlight that it is imperative that researchers have access to grants to limit impediments on research performance. Secondly, due to the COVID 19 pandemic, the study relied mostly on the electronic method of distributing the research questionnaire. That meant the speed of returning the questionnaire was reduced as most people were trying to adjust to the new normal of operating electronically. The researcher had to provide an electronic link which was to be used by the respondents to access the questionnaire. Thirdly, the researcher is permanently employed. That meant time was a limiting factor as he had competing commitments. The researcher had to find time outside of work time to balance his research activities. Finally, the time taken to complete the research was also delayed by as participating institutions took time to respond to the research questions.
- Researchers often assume that measurement scales that are statistically tested and validated have the capacity to measure accurately the phenomenon it is supposed to measure and to produce reliable outcomes. This assumption is described by Bryman & Bell (2011:41) as an “artificial and spurious sense of precision and accuracy.” They argued that contention is found within the reasoning that the connection between the measures developed by social scientists and the concepts they are supposed to be revealing is assumed rather than real.

Moreover, another assumption with regard to measuring instrument is the assumption that participants to a study will be able to interpret and understand the questions being asked. Bryman & Bell (2011) argue that people have a tendency of interpreting statements differently especially when provided with alternative answers. The measuring instrument used in this study depended greatly on its reliability and validity content, thus falling within the limitations that have been described above.

- Researchers often assume that participants to a study have fixed dispositions concerning the constructs under study without paying attention to real life experiences of the participants (Bryman & Bell, 2011). The present study assumed that the research constructs examined in the study apply equally to different categories of research participants. Nonetheless, real life experiences of individual participants may not be same, for example, factors influencing employee engagement may not be the same across organisations given differences in social, group and organisational dynamics.
- Another limitation of the present study concerns the composition of the participants to the study. The study assumes that participants were able to read and understand the English language without verifying the proficiency of the participants on the use of English. This limitation may affect the interpretation and understanding of items on the measuring instrument thus affecting the validity of the study.

8.8 Suggestions for future research

- The current study investigated employee engagement and skills development as independent variables that influence the employee innovation. Further studies may investigate whether the independent variables will have moderating effects on each other to influence the employee innovation.
- The delimitation of the study focused on the manufacturing sector organisations found in the Harare province alone. Therefore, the results may not be generalised to apply to the whole of Zimbabwe. As such, future studies may be conducted in other provinces of Zimbabwe in order to have a clear picture and to be able to generalise the findings across the nation.
- As much as the sample for this study was adequate and produced valid statistical results, the results of this study cannot be generalised and produce valid statistical results to mean other sectors of the economy such as transport, health and tourism, as the present study

used a restricted sample. Studies may also explore the investigated relationship(s) in other sectors of the economy to have better understanding of the variables and be able to generalise the findings across other sectors of the economy.

- From an empirical point of view, and after performing the Pearson Chi-square test, there was no statistically significant relationship between position in the organisation as a demographical characteristic with employee innovation. Using different statistical analysis techniques, future studies may explore this relationship to get in-depth knowledge on what could have caused the relationship to be insignificant.
- The present study adopted the quantitative research approach. Future research could also adopt the qualitative research approach to obtain greater meaning from the respondent's by understanding their actions through interactions.

8.9 Chapter Summary

This chapter is the concluding chapter of the thesis. In this chapter, research findings from the previous chapter are used to answer the research questions identified in the initial chapter. The chapter confirmed the proposed model of the study and provided justification for integrating three different models to come up with a conceptual framework. The judgements drawn from answering the research questions were used to deduce the study contributions. The significance of the findings was used to come up with managerial implications. Lastly, the chapter highlighted the limitations to the study before providing concluding remarks.

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LIST OF APPENDICES

Appendix A: Letter requesting permission to carry out research



28 February 2020

To whom it may concern

REQUEST FOR GATEKEEPER'S LETTER

In fulfilment of the requirement for the PhD qualification in the School of Management, Information and Public Governance within the College of Law and Management at the University of KwaZulu-Natal in South Africa students are required to complete a doctoral thesis based on empirical research in a specific field of study from any organisation of their own choice. To that effect, I **Mr Malvern Waini Chiboiwa (Student number: 218083164)** have identified your organisation to conduct an enquiry. My research is entitled: **Fostering employee innovation through engagement and skills development in the manufacturing sector in Zimbabwe.**

Your assistance in permitting access to your organisation for the purpose of this research is most welcome. Please be assured that all the information gathered for this research will be treated with utmost confidentiality and confidentiality and anonymity of information will be strictly adhere to.

For any further information or queries regarding this research please do not hesitate contact my supervisor, Dr BR Qwabe (Qwabebr@ukzn.ac.za) during any stage of the research.

Thank you for your assistance in this regard.

Yours sincerely






M.W Chiboiwa
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Founding Campuses:  Edgewood  Howard College  Medical School  Pietermaritzburg  Westville

INSPIRING GREATNESS

Appendix B: Table for determining sample size

N	S	N	S	N	S
30	28	280	162	1500	306
40	36	290	165	1600	310
50	44	300	169	1700	313
60	52	320	175	1800	317
70	59	340	181	1900	320
80	66	360	186	2000	322
90	73	400	196	2200	327
95	76	420	201	2400	331
100	80	440	205	2600	335
110	86	460	210	2800	338
120	92	480	214	3000	341
130	97	500	217	3500	346
140	103	550	226	4500	354
150	108	600	234	5000	357
160	113	650	242	6000	361
170	118	700	248	7000	364
180	123	750	254	8000	367
190	127	800	260	9000	368
200	132	850	265	10000	370
210	136	900	269	15000	375
220	140	950	274	20000	377
230	144	1000	278	30000	379
240	148	1100	285	40000	380
250	152	1200	291	50000	381
260	155	1300	297	75000	382
270	159	1400	302	1000000	384

Source: Adopted from Sekaran, 2003

Appendix C: Survey Questionnaire

QUESTIONNAIRE

I am a PhD student in the College of Law and Management Studies, School of Management, Information Technology and Governance at University of KwaZulu Natal. I am conducting research on employee innovation, engagement and skills development. I am kindly requesting you to complete this questionnaire. All the information collected from the questionnaire will be used for academic purposes only and will be kept in strict confidence.

Section A

Please indicate your response by putting an (X) in the appropriate box

1. Gender

Male	
Female	

2. Age

20-30	31-40	41-50	51-60	41-50	51-60	61+

3. Marital Status

Single	Married	Divorced	Widowed

4. Educational Qualifications

High School	Certificate	Diploma	Degree	Other(Specify)

5. Years of service in the organisation

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6. Position in the organisation.....

Section B

This section of the questionnaire relates to employee engagement at the workplace. Please carefully read each statement and indicate the extent to which you agree or disagree. Mark with an (X) in the appropriate box.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. At my work I feel like bursting with energy	1	2	3	4	5
2. I feel happy when I am working intensely	1	2	3	4	5
3. I am proud of the work that I do	1	2	3	4	5
4. I am immersed in my work	1	2	3	4	5
5. I can continue working for very long periods at a time	1	2	3	4	5
6. To me, my job is challenging.	1	2	3	4	5

7. I get carried away when I'm working	1	2	3	4	5
8. At my work, I feel bursting with energy	1	2	3	4	5
9. At my job, I feel strong and vigorous.	1	2	3	4	5
10. I am enthusiastic about my job.	1	2	3	4	5
11. When I am working, I forget everything else around me	1	2	3	4	5
12. My job inspires me	1	2	3	4	5
13. It is difficult to detach myself from my job.	1	2	3	4	5
14. I find the work that I do full of meaning and purpose.	1	2	3	4	5
15. Time flies when I'm working.	1	2	3	4	5
16. At my job, I am very resilient, mentally.	1	2	3	4	5
17. At my work I always persevere, even when things do not go well.	1	2	3	4	5

Section C

In this section of the questionnaire, information related to skills development is asked. Carefully read each statement and indicate whether agree or disagree. Mark with an (X) in the appropriate box

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Have you received any training since joining the organisation	1	2	3	4	5
2. Does the organization provide any training to its employees	1	2	3	4	5
3. Have you ever been selected for training in the organisation	1	2	3	4	5
4. Is the training you received relevant to your job	1	2	3	4	5
5. Has the training made any impact on your job performance	1	2	3	4	5
6. Has the training helped improve your work performance	1	2	3	4	5
7. Has the training addressed your individual needs	1	2	3	4	5
8. Do you think you possess the requisite skills and knowledge for your job	1	2	3	4	5
9. Are your qualifications and skills matching the requirements of the job	1	2	3	4	5
10. Are qualifications important for this job	1	2	3	4	5

11. Would you require further training to motivate you to improve your performance	1	2	3	4	5
12. Is training necessary to improve your work processes	1	2	3	4	5
13. Is the training you received of superior quality	1	2	3	4	5
14. How good is the training you have received for this position	1	2	3	4	5
15. Do you have any complains with regards to training you have received on this job	1	2	3	4	5
16. Do you pay for your own training	1	2	3	4	5
17. Do you think it's important to individually develop yourself	1	2	3	4	5
18. Do you think it's necessary to pay your own tuition for training	1	2	3	4	5
19. Does the organization fund individuals who want to go for training	1	2	3	4	5
20.Does the government subsidize training	1	2	3	4	5
21.Are there any policies regarding training and development of employees in the organization	1	2	3	4	5
22.Is training a priority in this organisation	1	2	3	4	5
23.Are the objectives of training clearly communicated in this organisation	1	2	3	4	5
24.The quality of work has improved due to training	1	2	3	4	5

25. Training has provided me with important workplace skills	1	2	3	4	5
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Section D

This section of the questionnaire measures the extent to which employees involve themselves in innovative behavior at the workplace. Carefully read each statement and indicate the extent to which you are satisfied or dissatisfied. Please mark with an (X) in the appropriate box.

	Strongly Dissagree	Disagree	Not sure	Agree	Strongly agree
1. My boss encourage new ideas from employees	1	2	3	4	5
2. My supervisor encourage employees to try and solve problems in different ways	1	2	3	4	5
3. Our managers recognize employees who are creative and innovative in doing their jobs	1	2	3	4	5
4. Does your organization regard employees as a good source of innovative ideas	1	2	3	4	5
5. Are employees at your workplace encouraged to search new ideas	1	2	3	4	5
6. Does your organization allow employees to come up with new and practical ideas	1	2	3	4	5
7. To what extent does your employer encourage employees to contribute to the development of new business	1	2	3	4	5
8. To what extent does your employer encourage employees to contribute to new product development	1	2	3	4	5
9. I feel driven to make a difference at my work place	1	2	3	4	5

10. Whereever I have been, I have been a powerful force for constructive change	1	2	3	4	5
11. Nothing is more exciting than seeing my ideas turn into reality	1	2	3	4	5
12. I love to challenge the status quo	1	2	3	4	5
13. I excel at identifying opportunities	1	2	3	4	5
14. If I have an idea no obstacle will prevent me from making it happen	1	2	3	4	5
15. I am great at turning problems into opportunities	1	2	3	4	5
16. If I see something in trouble I help out in any way I can	1	2	3	4	5
17. The environment I work in permits me to come up with new ideas	1	2	3	4	5
18. I work in an environment which discourage new ideas	1	2	3	4	5
19. I try to come up with unique ways of solving problems	1	2	3	4	5
20. I enjoy finding solutions to complex problems	1	2	3	4	5
21. I usually come up with a significant number of alternatives to the same problem before I make my final decision	1	2	3	4	5
22. I sometimes challenge myself to find problems or challenges before they occur	1	2	3	4	5
23. I think about an assignment from multiple perspectives	1	2	3	4	5
24. I usually break a complex assignment into parts to obtain greater understanding	1	2	3	4	5

THANK YOU FOR PARTICIPATING!!

ASOKA ENGLISH LANGUAGE EDITING

45 Vausedale Crescent, Escombe, 4093.

CELL NO.: 0836507817



DECLARATION

THIS IS TO CERTIFY THAT THE THESIS ENTITLED

Fostering employee innovation through employee engagement and skills development: A case of the manufacturing sector in Zimbabwe

Candidate: Chiboiwa MW

HAS BEEN ENGLISH LANGUAGE EDITED.



DISCLAIMER

Whilst the English language editor has used electronic track changes to facilitate corrections and has inserted comments and queries in a right-hand column, the responsibility for effecting changes in the final, submitted document, remains the responsibility of the client and the editor cannot be held responsible for the quality of English Language expression used in corrections or additions effected subsequent to the transmission of this certificate on 01/12/2021.

Prof. Dennis Schaffer, M.A.(Leeds), PhD, KwaZulu (Natal), TEFL(London), TITC Business English, Emeritus Professor UKZN. Univ. Cambridge Accreditation: IGCSE Drama. Hon. Research Fellow, DUT. Durban University of Technology.

Ethical Clearance letter



10 November 2020

Mr Malvern Waini Chiboiwa (218083164)
School Of Man Info Tech & Gov
Pietermaritzburg Campus

Dear Mr Waini Chiboiwa,

Protocol reference number: HSSREC/00002099/2020

Project title: Fostering employee innovation through engagement and skills development in the manufacturing sector in Zimbabwe.

Degree: PhD

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 08 October 2020 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL** on the following condition:

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 10 November 2021.

To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,



Professor Dipane Hlalele (Chair)

/dd

Humanities and Social Sciences Research Ethics Committee

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