Developing a conceptual framework to analyse engagement and disengagement in the workplace

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ABSTRACT

This study focuses on the development of a validated and confirmed employee engagement measuring model for use by managers and academia.

Data was collected from an array of South African managers by employing a structured 5-point Likert scale questionnaire. A total of 260 usable questionnaires could be analysed, signifying a high response rate of 80%. The Statistical Package for Social Sciences software (Version 18, Version 22.0 and AMOS for Windows) was used as the quantitative analytical software. The following statistical techniques were employed to analyse the data, namely the Kaiser-Meyer-Olkin measure of sampling adequacy, Bartlett's test of sphericity, Cronbach Alpha reliability coefficients, Exploratory factor analysis, Confirmatory factor analysis and the Pearson correlation coefficient.

The development of the Measure Employee Engagement model wielded theoretical and empirical research. The format was structured into four logical stages, hence the presentation of the study in the approved article format. The study covers the following four steps (as per articles):

Article one departed by performing a literature study of employee engagement constructs and its measuring criteria. It examined the application of a myriad of models in various application settings to identify the relevant constructs and measuring criteria. From these constructs and criteria, a draft questionnaire was constructed to collect the data on 11 employee engagement constructs. Validation of measuring criteria was performed to ensure that the criteria accurately measure the specific employee engagement construct. The data was also tested for acceptable reliability levels.

The second article departs on the validation of the constructs and its measuring criteria, this time as a unified model and not, as performed in Article 1, the construct validation individually. The objective of this article was to simplify the complex model without deterioration of the measuring contribution thereof. This was achieved by employing factor analysis, and after four rounds of eliminating low-loading and dual-loading criteria, the questionnaire was reduced by 25 measuring criteria and seven factors were extracted

explaining a favourable 69.75% of the variance. The simplified model was scrutinised to ascertain statistical validity thereof, an objective achieved with flying colours. The inter-correlations between the seven factors were satisfactory, underpinning the validity of the model.

The third article focuses on confirming the employee engagement constructs statistically by means of Confirmatory Factor Analysis as well as to determine the goodness of the model fit. The results confirmed that all seven constructs were significant ($p<0.05$) and important according to the standardised regression weights. Surprisingly, the most important respondent construct *Behavioural engagement* had the lowest regression weight, while the lower rated *Career growth opportunities* showed a much higher regression weight – signifying a higher importance and influence on employee engagement. Regarding goodness of model fit, the CFI, RMSEA and Hoelter's indices' were used. These indices showed that the model as stated above to measure employee engagement is a good fit and that it can be operationalised to be employed in managerial application settings.

Article four operationalised the model validated in Articles 2 and 3. The article thus reports on the actual measurement of the different employee engagement constructs as perceived by the respondents. The results showed that the respondents regarded all seven the constructs as important, with *Behavioural employment* being regarded as the most important one. *Career growth opportunities*, surprisingly, was rated the least important construct of employee engagement. Correlational analysis indicated that no significant correlation coefficients exist between the demographic variables and the constructs of employee engagement.

The study consisted of both a literature study as well as an empirical study. The university libraries of the North-West University and Management College of South Africa's Business School were used to source reference materials with the aid of a specialised research librarian at the North-West University to assist in the location of the most appropriate sources.

Apart from the conclusions based on the results obtained in model development, generalised conclusions include the development of a successful model development methodology and guidance in the use of a number of the statistical techniques. This could greatly assist future researchers in the design of their studies, even outside the discipline of employee engagement.

Key terms: employee engagement, model design, research methodology, factor analysis, model fit, management, leadership.

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CHAPTER 1

NATURE AND SCOPE OF THE STUDY

1.1 INTRODUCTION

The concept *employee engagement* was originally described by Khan (1990) as a unique and important motivational concept. He refers to employee engagement as "*the harnessing of an employee's full self in terms of physical, cognitive and emotional energies to work role performances*". Kahn (1990) (in Shuck, Reio & Rocco, 2011:427) continued to reason that employee engagement is the social or psychological contract between organisations and their employees. Shuck et al. (2011:428) expanded Kahn's (1990:693) theory to explore the concept of employee engagement stating that employee engagement may be seen as "*an individual employee's cognitive, emotional and behavioural state directed toward desired organisational outcomes*". Kahn (1990:699) found that "work contexts shape the process of people presenting and absenting during task performances". More recently, research by Crabb (2011:28) defines employee engagement as:

> *"A positive attitude held by the employee towards the organisation and its values. An engaged employee is aware of business context, and works with colleagues to improve performance within the job for the benefit of the organisation. The organisation must work to develop and nurture engagement, which requires a two-way relationship between employer and employee."*
>
> Crabb (2011:28)

MMG (2013), in support of the line of though by the above researchers, refers to employee engagement as a situation where all the employees are engaged in their own work and take keen interest in the organisation's activities. The engaged employee is focused and enjoys his/her work and learns something new each day. He/she is satisfied with their work and would never think of quitting his job.

Resulting from the formalisation of employee engagement as managerial concept, employee engagement has gained momentum as management focus in recent management literature and as focus of human resource management publications (Lewis, Thomas & Bradley, 2012:27). The level of interest and encouraging reviews from research and in the popular management media are creating a positive reputation for employee engagement as relatively new concept of management practice. However, although more organisations are focusing on employee engagement as a strategy to increase efficiency and improve productivity, surprisingly, there remains a relative shortage of empirical research on employee engagement focused in the utility of the concept in practice (Shuck et al., 2011:429).

Presently, the modern approach to the concept *Emotional engagement* can be defined as:

"*Emotional connection an employee feels toward his or her employment organization, which tends to influence his or her behaviors and level of effort in work related activities. The more engagement an employee has with his or her company, the more effort they put forth.*"

Business Dictionary (2015)

"*Engaged workers stand apart from their not-engaged and actively disengaged counterparts because of the discretionary effort they consistently bring to their roles. These employees willingly go the extra mile, work with passion, and feel a profound connection to their company. They are the people who will drive innovation and move your business forward*."

Reilly (2014)

"Employee engagement is the extent to which employees feel passionate about their jobs, are committed to the organisation, and put discretionary effort into their work."

Custominsight (2015)

While exact definitions of employee engagement differ, all include the line of thought that employee engagement is concerned with the employees' emotional commitment to an organisation, taking into account the magnitude of discretionary effort they are willing to expend on behalf of their employer. The definitions also highlight that employee engagement encompasses that engaged employees have a sense of personal attachment and commitment to both their work and organisation; they are motivated and put discretionary effort into their work – and from this flows benefits for the organisation and individual alike. Highly engaged employees go above and beyond their core responsibilities as outlined in their job descriptions, innovating and thinking "outside the box" to help move the organisation forward.

According to Crabb (2011:29) employee engagement is a positive organisational practice that has received a wealth of attention, mainly from practitioners rather than academics, in recent years (Saks, 2006 in Kular et al., 2008). In the influential study on the drivers of employee engagement, Robinson, Perryman and Hayday (2004) define employee engagement as 'a positive attitude held by the employee towards the organisation and its values. An engaged employee is aware of business context, and works with colleagues to improve performance within the job for the benefit of the organisation. The organisation must work to develop and nurture engagement, which requires a two-way relationship between employer and employee. The notion of employee engagement is an appealing concept to business leaders, as the research highlights numerous organisational benefits obtained from an engaged workforce. Studies (Towers Perrin Global Workforce Survey, 2007/2008) have shown that organisations with engaged employees create higher performance levels and remain ahead of their competitors. In support, research in employee attitudes found that engaged employees tended to take less sick leave and were less likely to leave their employer than their non-engaged counterparts (CIPD Annual Survey Report, 2006).

The MacLeod Review (2009) identified management as an employee engagement driver, stating that management of an organisation could have a significant effect on their employees' levels of engagement. Management who does not share the belief that employee engagement contributes positively to organisational performance (or those

managers who do not have the ability to implement engagement strategies) could reduce the success rate of employee engagement strategies. They, furthermore, could unintentionally encourage an organisational culture where employee engagement is not harboured. This perspective takes a more cynical view of poor management buy-in, and Luthans and Peterson (2001) argue that poor management buy-in may be a result of poor self-efficacy, and as a result, managers themselves become disengaged. This disengagement could then negatively influence the engagement of their team. The influence that managers have on employee engagement is also argued from a different perspective, and the CIPD (2009) argue that employees do not leave their jobs, they leave their managers. Employees, who are unhappy with their managers and the way they are managed, are less likely to be engaged and more likely to leave the organisation.

This means that it is imperative that employee engagement is conceptualised as well as evaluated in the studies aiming at the effect human capital has in organisations. This view is supported by Slatten and Mehmetoglu (2011) who suggest that employees are more engaged when they felt emotionally safe and, resultantly, became more psychologically available. Khan (1990) suggested that employees could be cognitively, emotionally or physically engaged. In addition Luthans and Peterson (2001) added that to be psychologically engaged is to structure significant relationships towards colleagues as well as to understand compassion and anxiety meant for others. Smyth and Fasoli (2007:277) expands by adding that employee engagement can also be regarded to be part of the social or psychological contract between an organisation and its employees. In this regard McBain (2007) points out that employee engagement encompasses and involves employee satisfaction, motivation, commitment and the psychological contract as integral parts, and that these components also require managerial intervention to reap the benefits of an engaged workforce.

Whilst it is imperative that organisations do understand what employee engagement entails and its impact on both the individual and on the organisation, it is important to consider that every sizable organisation also has, as a result of the dynamics of a modern workforce, a proportion of its workforce that is not engaged employees, thus disengaged employees. Problems may develop throughout the workplace when organisations do not deal with

actively disengaged employees. Disengagement is contagious and causes drag in terms of low contribution and failing to address disengagement may be a tacit signal that the organisation (or the manager) tolerates sub-par performance (Blessing White, 2013). Employee disengagement, according to research by the Entec Corporation (2010) refers to employees who have no emotional commitment to their work or their place of employment (Entec Corporation, 2010). This does not mean that these disengaged employees are necessarily poor employees or that they do not make a contribution. They typically do not take part in offering suggestions for improving the workplace. This research found that disengaged employees usually do not stay at work late if it is not required, and they do not give their jobs much thought after they finish a work day. Actively disengaged employees can deteriorate employee morale and performance because they undermine their jobs and objectives of the employers. In such cases, employers should try to determine what is behind active disengagement to prevent it from getting out of control.

The problem may be that some employees are unhappy because their jobs are not suitable for their skills or they are dealing with managers who have poor leadership skills. In this regard research conducted by Custominsight (2013), indicated that the leading cause for disengagement of employees is poor relationships between employees and their managers. A company's most-talented workers may define themselves as disengaged. A 2010 survey by the Corporate Executive Board Research Company (CEB) found that more high-potential employees are looking for new jobs because they have become disengaged in their current positions. The CEB found that 25% of high-potential workers planned to leave their jobs in 2010, when only 10% of those employees intended to find new jobs (CEB, 2006). The board's employee engagement research included a survey of 20,000 high-potential employees at more than 100 businesses worldwide. The CEB survey also found that about one in five high-potential employees saw themselves as "highly" disengaged workers in 2010, which marked a three-fold increase from other research results three years earlier.

Although definitions and conceptualisation differ from organisation to organisation, human resource professionals generally agree that satisfaction is a measurement of how employees feel, and that employee “happiness” with their current job and conditions plays

an integral part in management. In addition, engagement measures employees' emotional commitment to an organisation, and increases the competitiveness of the organisation due to engaged employees walking the extra mile.

1.2 PROBLEM STATEMENT

The performance or organisations, as indicated above, is positively influenced by an employee engaged workforce. The heightened emotional connection between organisation and employees positively contributes to organisational performance because employees take less sick leave, actively engages organisational problems, commit to achieving company goals at their own volition, and are willing to contribute their time, talents and abilities to the success of the organisation, extending their discretionary efforts to go above and beyond their management's acceptable performance standards (Johnson, 2011:16). On the other hand, research by Hewitt Associates (2009) found that low-engagement organisations' total shareholder returns are up to 44% below average. Business performance is the responsibility of management, and their ability to unlock the human capital, as performance driver in the organisation, is crucial (Smit & Beatie, 2010:267). In this regard Gallup (2011) points out that in their research 54% of employees were not engaged, 17% were actively disengaged, and only 29% could be considered as engaging their time and talents. Gallup's research also revealed how disengaged employees adversely impact a company's performance and profits. According to the research findings disengaged employees result in 27% more absenteeism, 31% more turnover, 51% less effective and 62% more accidents. The research findings also reported that engaged employees account for 12% higher customer satisfaction scores, 18% higher productivity, 12% profitability and 17% higher earnings per share. From this, and other abovementioned research, employee engagement could provide a competitive benefit managers cannot afford to ignore. However, understanding employee engagement as universal concept seems to differ between organisations and managers. Typical uncertainty results in questions such as:

- Is employee engagement just another new managerial fad?
- Is employee engagement just an old concept revamped or renamed to appear new?

- Is employee engagement just a fancy term for employee satisfaction or employee involvement?
- Is employee engagement a managerial focus on its own, or is it just part of the human resource strategy of an organisation?
- How is employee engagement determined, and how addressed if identified?

Resolution to such managerial uncertainties is embedded in scientific studies aimed at employee engagement. These studies should also indicate the differentiation in management practices between employee engagement and other near-similar management concepts. These concepts, that are in fact commonly (and often inappropriately), synonymously used are concepts such as employee satisfaction, organisational commitment, employee commitment and other human resource related management concepts. Crabb (2011:30) supports this differentiation drive and is of the view that recent research into employee engagement was largely informative, and although useful, has focused largely on what management in organisations can do to engage their employees. The drivers of engagement are viewed at an organisational level, considering job features such as engaging managers, supportive supervisors, giving the employee a "voice" and displaying organisational integrity. These are drivers within the organisation's (rather than the individual's) control, and creating an engaged employee workforce are thus a managerial function. In this regard Crabb (2011:30-31) states that employee engagement is dependent on how the level of engagement can be measured to identify the internalised drivers of engagement that people hold within themselves. However, just there the core of the problem surfaces, namely: How to measure employee engagement scientifically and apply the results to improve engagement as performance driver in the organisation? In this regard Shuck et al. (2011:431) pointed out that although more organisations are focusing on employee engagement, a relative shortage of empirical research on employee engagement remains, especially with regard to identification and measurement of employee engagement drivers.

In view of the lack of analytical tools to actually measure employee engagement, this study therefore aims to resolve the measurement of employee engagement. As a result the study aims to address the problem of limited measuring tools to measure employee engagement

and to develop a conceptual model to measure employee engagement. In order to do so research is required that investigates and identifies critical factors necessary for understanding employee engagement and hence, proposes a validated conceptual model developed to positively influence employee engagement in organisations as well as to confidently measure the levels of employee engagement in organisations.

1.3 OBJECTIVES

1.3.1 Primary objective

The primary objective of this study was to develop a conceptual model to measure employee engagement of managers.

1.3.2 Secondary objectives

The primary objective is served by the following secondary objectives (serving as primary objectives of the individual articles), namely to:

1. Develop a validated and reliable model to measure employee engagement (Article 1);
2. Simplify the validated model to measure employee engagement (Article 2);
3. Confirm the constructs of the model to measure employee engagement (Article 3);
4. Determine the goodness of the model fit (Article 3);
5. Measure the employee engagement of manager-respondents in South Africa (Article 4);
6. Draw conclusions and make recommendations on the measurement and management of employee engagement;
7. Identify additional conclusions and recommendations pertaining to the research methodology employed; and
8. Identify areas for further research to in employee engagement.

1.4 RESEARCH METHODOLOGY

The research methodology consists of both a literature study and an empirical study.

1.4.1 Literature study

The literature study focuses on employee engagement, covering firstly the drivers of employee engagement, secondly the measuring criteria of employee engagement, and thirdly, validity and reliability theory in model construction. The literature forms a solid theoretical basis for the study.

The literature study employed accredited journal articles, textbooks, model development theory from similar studies (in different disciplines), conference proceedings and internet databases and Internet searches. The university libraries of the North-West University and Mancosa Business School were used to source reference materials, and a specialised research librarian was dedicated by the North-West University to assist in the location of the most appropriate sources. The following electronic search engines and databases were used to locate electronic sources:

1. EBSCO;
2. EMERALD;
3. SABINET;
4. Google Scholar;
5. University Internet journal memberships;
6. Other University databases; and the
7. University library catalogues.

1.4.2 Empirical study

1.4.2.1 Research Instrument

The structured questionnaire to measure employee engagement was specifically developed from the theory study. To do so a number of employee engagement models were identified. The employee engagement drivers were identified from the models, and further researched. The questionnaire employed 11 employee engagement drivers which were measured by 94 measuring criteria. In addition, the questionnaire measured

demographic variables of the managers. It recorded data on a 5-point Likert scale that ranged from: *1 = strongly agree* to *5 = strongly disagree*.

1.4.2.2 Sampling and data collection

A stratified sample was drawn by selecting the study schools of advanced management training programmes of a selected business school. The managers attending these study schools are diverse in culture, geographic, gender and nationality, hence providing access to a diverse sample. The questionnaire was administered to managers attending the study schools of the Management College of South Africa's Master in Business Administration degree in Durban and Johannesburg. This sample was purposefully selected after guidance by Moolla (2010) who employed a similar sample in developing a brand loyalty model. The advantages of this sample are that:

- The sample consisted of middle and top managers with a minimum of three years' work experience;
- It sets a minimum educational level for entry into the research;
- It represents a segment that is more informed about contemporary business practices;
- It represents a community that is more likely to analyse their own careers and employee engagement perceptions;
- It represents middle to higher income earners that have a wider economic freedom and alternative employment exposure;
- It represents a segment of middle to higher income earners who are less susceptible to economic turbulence;
- It represents a segment that falls between LSM 6 to LSM 10 category;
- They would be able to understand the terminology and nomenclature used in the questionnaire; and be
- More educated in terms of higher order employment issues such as engagement and managerial interventions.

This sample also had the embedded advantage that data collection was quick and the environment controllable, hence a good response rate was expected.

The questionnaires were distributed in the class situation and respondents were given ample time to complete the questionnaires. The questionnaires were anonymous and confidentiality was guaranteed. Completion was voluntarily and the questionnaire also enjoyed the ethical clearance of the North-West University's faculty ethical committee. A total of 300 questionnaires were distributed and a total of 260 usable questionnaires were received back. Some 22 respondents opted out while the other 18 only partially completed the questionnaires. These questionnaires were discarded from the analysis. This signified a satisfactory response rate of 86.6%.

1.5 STATISTICAL ANALYSIS

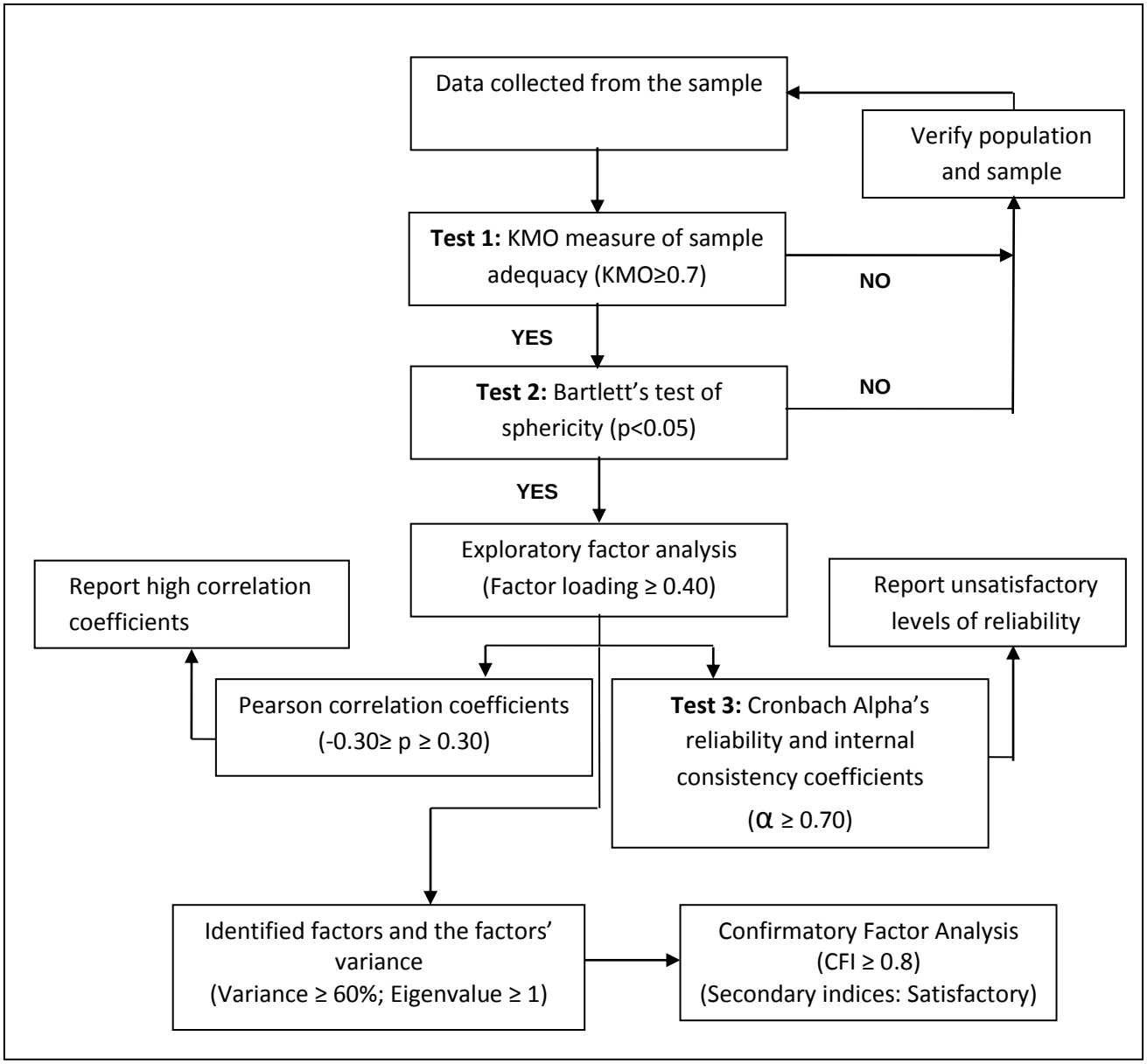
The Statistical Package for Social Sciences software (Version 18, and later Version 22.0 for Windows, as well as the add-on package AMOS performing Structural equasioning and Confirmatory factor analysis) was used as the software for the quantitative analysis. As suggested by Hamid (2014:7-8), the befitting level of quantitative statistical techniques appropriate to a doctoral study were employed to analyse the data. The following techniques employed to analyse the data were:

1. Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy;
2. Bartlett's test of sphericity;
3. Cronbach Alpha reliability coefficients;
4. Exploratory factor analysis;
5. Confirmatory factory analysis; and
6. Pearson correlation coefficient.

The KMO measure tests that the sample is adequate to perform statistical analysis. The Bartlett's test of sphericity evaluates the suitability of the data in order for it to be subjected to advanced statistical techniques (such as the Exploratory factor analysis and the Confirmatory factor analysis). The identified factors, in addition to the data, were also tested for reliability by means of calculating each factor's Cronbach Alpha coefficient. The

Pearson Correlation coefficient was employed to identify the inter-correlations between the factors, as well as to determine if any correlations exist between the demographic variables and the factors. Finally, the model is tested and confirmed by the Confirmatory factor analysis, indicating the relative importance and significance of the factors whilst the goodness of model fit was also determined. The statistical analysis, as developed by Naidoo (2011) and successfully employed by the researchers Fields (2013) and Hamid (2014), appears in Figure 1.1.

Figure 1.1: Data analyses decision-tree



Source: Adapted from Naidoo (2011:19); Field (2007) and Arbuckle (2012)

The decision-tree criteria pertaining to the statistics were followed throughout the interpretation of the data in this study. The techniques are discussed in detail below.

1.5.1 Kaiser- Meyer-Olkin (KMO) measure of sample adequacy

The KMO measure of sample adequacy examines if the data presented renders sufficient variables to result in meaningful results if analysed statistically. This is especially important if multivariate statistical analysis is required (Field, 2007:640). This study employs factor analysis as a multivariate statistical technique. The KMO analysis returns a value that varies between 0 and 1, indicating adequacy of the sample. According to Hamid (2014), a value of 0 suggest that the sum of partial correlation is large relative to the sum of correlations, indicating diffusion in the pattern of correlations while a value close to 1 indicate that patterns of correlation are relatively compact and therefore factor analysis should yield distinct reliable factors. The larger the KMO value, the better the factor analysis for the particular sample should be, explaining more variance and producing clearer factors. Field (2007:640-648), in this regard, points out that if the KMO value falls below 0.5, factor analysis is probably not a suitable statistical tool to use. If a KMO is 0.50 or lower, more data should firstly be collected to improve the adequacy before analysing the data.

KMO values are interpreted as: ≥0.60 & <0.70 - Fair; ≥0.70 & <0.80 - Good; ≥0.80 & <0.90 - Very good and ≥.90 - Superb (Field, 2007:788). In this study the required KMO value is set at 0.70.

1.5.2 Cronbach Alpha's reliability coefficient

Cronbach Alpha coefficient is employed to determine if the data, as collected by the questionnaire (which is the data collecting instrument in this study), is reliable and fit for use. Reliability of the data means that the questionnaire measures the same variables repeatedly with similar outcomes or results (Salkind, 2000:106). This means that if data is

reliable, the researcher should, for example, be able to extract the same factors, in a similar application setting. As such, reliability is commonly defined as the consistency of a set of measurements or measuring instrument often used to describe a test (Bisschoff & Kade, 2010:4). Cronbach alpha values of 0.70 are deemed to be satisfactory (Field, 2007:666), and as such the required Cronbach Alpha for this study is set at 0.70

1.5.3 Bartlett's test of sphericity

Bartlett's test of sphericity is used to determine if a variance-covariance matrix is proportional to the identity matrix (Hamid, 2014:9), and by doing so, renders a verdict on the suitability of data for multivariate statistical analysis (Field, 2007:659-660). This means that the Bartlett test of sphericity is an indicator of the strength of the relationship among variables as well as an indicator of the suitability of data towards a multivariate statistical technique such as factor analysis University of California in Los Angeles (as cited in Naidoo (2011:20). Bartlett's test of sphericity is interpreted as acceptable if the values of 0.05 and below are returned. This means that the values can be regarded as significant and that the data is suitable for multivariate analysis. This study has satisfactory values below 0.05 (Field, 2007:659).

1.5.4 Exploratory factor analysis

Exploratory factor analysis (EFA) aims to identify underlying constructs (latent variables) that are either unknown of cannot directly be measured (Hamid, 2014:10). These identified constructs are called "factors". Factor analysis, with its origin in psychology, is particularly suitable for social sciences and human behavioural research, and is regarded to be an important analytical tool to identify groups and clusters of variables (Costello & Osborne, 2005:5). Factor analysis, in essence (Field, 2007:731):

- Simplifies the structure of a set of variables for better understanding;
- Identifies underlying constructs or variables from data sets; and
- Reduces the data set to a more manageable size.

In addition to the uses listed above, the goodness of fit of the extracted factors is indicated by the variance explained, where 60% indicated a satisfactory fit to the data (Bisschoff & Kade, 2012:5). This study aims to achieve a good fit by explaining at least 60% of the variance.

1.5.5 Pearson correlation coefficient

The Pearson correlation coefficient is used to examine the relationship of one variable to another variable in the data set. The results are tabulated in the correlation matrix where the relationships of the variables are shown with regard to its orientation (positive or negative), strength and significance (Du Plessis, 2010). Hamid (2014:10) indicates that these correlation coefficients are statistical measures of the covariation, or association between two variables. The correlation coefficient varies from -1 to 1. A correlation coefficient of near -1 or 1 indicates that a high negative correlation or a high positive correlation, respectively, exists between two variables (Tang, Xiong, Zhao & Zang, 2003:99). In this study a Pearson correlation coefficient with an absolute value of 0.30 (signifying a medium correlation between the variables) was set as the minimum correlation coefficient (Du Plessis, 2010). In addition the level of significance was set at $p \leq 0.05$, with $p \leq 0.10$ as secondary level of significance (Zikmund, 2008:551).

1.5.6 Confirmatory factor analysis

Confirmatory factor analysis (CFA) is described as a “multivariate statistical procedure that is used to test how well the measured variables represent the number of constructs” (Harrington, 2008:1). Although a great deal of similarity exists between Confirmatory Factor analysis (CFA) and Exploratory Factor analysis (EFA), in exploratory factor analysis the data is explored to identify underlying dimensions embedded within the data set and to extract the numbers of factors required to satisfactorily explain the constructs of “factors” within the data (Moolla, 2010:9). All measured variables are also related to every latent variable. However, with regard to Confirmatory Factor analysis (CFA), the researcher specified the required number of factors to be tested in the data and also which of the observed variable(s) are related to which of the latent variable. As a result these

relationships were tested or confirmed. Confirmatory Factor analysis (CFA) is, therefore, a tool that is used to confirm or reject the measurement model. The technique also has the ability to provide numerous indices that are used to determine the model's goodness of fit (Moolla & Bisschoff, 2013), hence its applicability to be operationalised.

1.6. LAYOUT OF THE STUDY

This thesis is written in the approved article format. This means that four stand-alone articles (following the development of the model) have been written and is presented in chapters 2 to 5. Chapters 1 and 6 serve as the introductory and the final chapters respectively. The four scientific articled chapters were also written according to the specifications of the specific journal it is targeted for. As a result the *referencing techniques and also article layout differs according to journal specifications.* Each article also contains its own conclusions and recommendations. It is therefore important to note that the final chapter provides a summary presentation of each of the articles, and adds additional conclusions and recommendations befitting the study. Conclusions and recommendations appearing in the articles are therefore not repeated in Chapter 6. In addition, *the article format necessitates limited repetitive text or figures.* In this regard the research methodology and sample serves as an example while the repetitive presentation of the figure showing the model is also required because the articles follow one another and the figure is required for discussion and analysis more than one stand-alone article.

Article one

Article one departs by performing a literature study of employee engagement constructs and its measuring criteria. It examined the application of a myriad of models in various application settings to identify the relevant constructs and measuring criteria. From these constructs and criteria, a draft questionnaire was constructed to collect the data on 12 employee engagement constructs. Validation of measuring criteria was performed to ensure that the criteria accurately measure the specific employee engagement construct. The data was also tested for acceptable reliability levels.

Article 2

The second article departs on the validation of the constructs and its measuring criteria, this time as a unified model and not, as performed in Article 1, the construct validation individually. The objective of this article is to simplify the complex model without deterioration of the measuring contribution thereof. This was achieved by employing factor analysis, and after four rounds of eliminating low-loading and dual-loading criteria, the questionnaire was reduced by 25 measuring criteria and seven factors were extracted explaining a favourable 69.75% of the variance. The simplified model was scrutinised to ascertain statistical validity thereof, an objective achieved with flying colours. The inter-correlations between the seven factors were satisfactory, underpinning the validity of the model.

Article 3

The third article focuses on confirming the employee engagement constructs statistically by means of Confirmatory Factor analysis as well as to determine the goodness of the model fit. The results confirmed that all seven constructs are significant ($p<0.05$) and important according to the standardised regression weights. Surprisingly, the most important respondent construct *Behavioural engagement* has the lowest regression weight, while the lower rated *Career growth opportunities* shows a much higher regression weight – signifying a higher importance and influence on employee engagement. Regarding goodness of model fit, the CFI, RMSEA and Hoelter's indices were used. These indices showed that the model to measure employee engagement is a good fit and that it can be operationalised to be employed in managerial application settings.

Article 4

Article 4 operationalised the model validated in Articles 2 and 3. The article thus reports on the actual measurement of the different employee engagement constructs as perceived by the respondents. The results showed that the respondents regarded all seven the constructs as important, with *Behavioural employment* being regarded as the most important one. *Career growth opportunities*, surprisingly, was rated the least important construct of employee engagement. Correlational analysis indicated that no significant correlation coefficients exist between the demographic variables and the constructs of

employee engagement. This final article engages into measurement and evaluation of the model as measuring tool, and to determine the employee engagement levels of the managers.

1.7 REFERENCING TECHNIQUES EMPLOYED

It is important to note that no specific referencing or text citation is employed throughout the thesis. Chapters 1 and 6 employ the North-West University guidelines for Harvard referencing. However, Chapters 2-5 (representing Articles 1-4) employ the specific referencing and citation techniques required by the selected journal the specific article was submitted to. As a result the referencing in the four articles is unique.

In addition, it must be noted that the formatting guidelines of Chapters 2-5 also differs as the formatting guidelines of each of the journals also differ from one another. This includes issues such as heading styles, numbering and table or figure formatting.

The article format also necessitates that each article has its own list of references. Resultantly, these reference lists appears at the end of each chapter. All the references cited appear in the communal bibliography at the end of Chapter 6. This includes references used in the articles as well as in Chapters 1 & 6. Chapters 1 and 6 do not have their own reference lists.

1.8 SUMMARY

This chapter sets the scene by introducing the study and providing an overview to the content and layout of the study. The primary objectives of the study are introduced, supported by the secondary objectives. The layout as well as the format is presented whilst the primary objectives of the different articles are also listed. The scientific research techniques, including both the theoretical and empirical study is provided by introducing the different selected statistical techniques and the decision criteria employed in analyses of

the data. The chapter also describes the sampling, data collection and response rates achieved.

The next chapter presents the first stand-alone article. This article sets the development of the model to measure employee engagement in motion by a thorough research of employee engagement constructs and its measuring criteria. The article also contributes by developing the questionnaire required to perform the measurement of employee engagement.

CHAPTER 2

ARTICLE 1:

A MODEL TO MEASURE EMPLOYEE ENGAGEMENT

This article was submitted in October 2014 to the journal *Problems and Perspectives of Management* (Proquest IBSS listed). The article was approved and published in 2014, 12(4):520-532.

A MODEL TO MEASURE EMPLOYEE ENGAGEMENT

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ABSTRACT

This article reports on the development of a conceptual model to measure employee engagement. In doing so, the article firstly develops a theoretical model by identifying employee engagement constructs from the literature. Secondly, identifying measuring criteria of these constructs from the literature, and thirdly, to validate the theoretical model to measure employee engagement in South Africa. The theoretical model consists of 11 employee engagement constructs, measured by a total of 94 measuring criteria. The empirical process of validation employed data collected from 260 respondents who study towards an MBA degree at two private business schools in KwaZulu-Natal. The validation process aimed to validate the variables that measure each of the constructs by determining statistically that the sample employed is adequate, use the Bartlett test to ensure the applicability of the data for multivariate statistical analysis; to validate the measuring criteria as relevant to employee engagement, and to determine the reliability of each of the employee engagement constructs in the model. All these objectives were met. This culminated in the final result, namely an adapted empirical model to measure employee engagement in SA. The model tested statistically to be a valid and reliable model. The research is of value to management in the private and public sector, academics and researchers.

Key terms: Employee engagement, Validity, Reliability, Exploratory Factor Analysis (EFA)

JEL Classification: M51

INTRODUCTION

Employee engagement as managerial tool continues to gain momentum in modern management practices. However, before instilling any managerial decision-making on the positive influences that employee engagement can have in an organisation, it is imperative to first determine by measuring the levels of engagement of employees within an organisation.

Measuring employee engagement within an application setting within a structured measuring environment requires a validated and standardised measuring tool, or alternatively, a newly developed measuring tool that originates from the literature. This article deals with the measuring of employee engagement by developing a new conceptual model. The article develops the model on a strong literature basis, where after the criteria and constructs are validated statistically.

The application setting for the study is business managers in South Africa, and more specifically, managers in the process of post-graduate studies at two private business schools situated in KwaZulu-Natal (however, the respondents are not limited to one province because they are studying at study centres throughout South Africa).

Defining employee engagement

Employee engagement is gaining momentum and popularity, acquiring international attention as it has become an accepted belief that engaged employees feel a connection to their work which impacts positively on their performance. This is supported by Thayer (2008:74) who agrees that the concept of employee engagement is rapidly gaining popularity, use, and importance in the workplace and that by identifying the factors that can increase employee engagement, employers can make strategic adjustments within their organisations to create a positive psychological climate for employees.

Despite the popularity of the term "employee engagement" in the workplace, a precise definition of the term remains elusive because of continued research and redefinition surrounding the topic. Describing employee engagement, however, is done by listing the definitions and views of a number of renowned authors such as Hughes and Rog (2008), Crabb's research (2011:27) and Shuck and Reio (2013:157).

Hughes and Rog (2008:749) state that employee engagement is a heightened emotional and intellectual connection that an employee has for his/her job, organisation, manager, or co-workers that in turn influences him/her to apply additional discretionary effort to his/her work. Shuck and Reio (2013:159) define employee engagement as the cognitive, emotional, and behavioural energy an employee directs toward positive organisational outcomes. They go on to operationally define employee engagement as a series of psychological states (cognitive, emotional, and behavioural) ultimately representing an intention to act that encompasses motivation-like qualities.

Crabb's research (2011:27) defines employee engagement as a positive attitude held by the employee towards the organisation and its values. His research states that an engaged employee is aware of business context, and works with colleagues to improve performance within the job for the benefit of the organisation. The organisation must work to develop and nurture engagement, which requires a two-way relationship between employer and employee.

According to research conducted by Mone et al. (2011:206) employee engagement is defined as an employees' sense of purpose and focused energy that is evident to others through the display of personal initiative, adaptability, effort, and persistence directed toward the organisation's goals. In their research they describe employee engagement as defined by Gebauer and Lowman (2009 in Mone et al., 2011:208) as having a deep and broad connection with the company that results in the willingness to go above and beyond what is expected to help the company succeed.

Johnson (2011:13) refers to a definition of employee engagement by Towers Perrin (2011) as the extra time, brainpower, and the energy that employees put toward their work that results in discretionary effort. They state that employee engagement requires a mutual contract between the organisation and its employees, where organisations have a responsibility to train their employees and build a meaningful workplace.

The 2012 Global Workforce study presents a new and more robust definition of employee engagement and focus more on the concept of *Sustainable Engagement designed for the 21st century workplace*. In this regard, sustainable engagement describes the intensity of employees' connection to their organisation based on three core elements (Towerswatson, 2012):

- The extent of employees' discretionary effort committed to achieving work goals (being engaged);
- An environment that supports productivity in multiple ways (being enabled); and
- A work experience that promotes well-being (feeling energised).

Drawing on the various definitions of employee engagement discussed above, it is apparent that an important thread runs through all the definitions described above, this being the extent of employee discretionary effort to his/her work.

PROBLEM STATEMENT

Interest in this study revolved around the notable gap that exists regarding a validated model of employee engagement. Popular as the topic may seem, research regarding employee engagement thus far has revealed that there are models supporting the importance of employee engagement, however, there remains a shortage of research regarding a practical and theoretical model to measure engagement.

The Corporate Leadership Council's model of engagement as presented by the Corporate Executive Board (2004:5) defines engagement as the extent to which employees commit to something or someone in their organisation, how hard they work, and how long they stay as a result of that commitment and is an outcome-focused model of engagement.

A conceptual model of employee engagement, presented by Shuck et al. (2011:429), reveals that three variables, namely *job fit, affective commitment,* and *psychological climate,* are suggested to influence the development of employee engagement.

The research surrounding employee engagement up to now proves informative but has focused mainly on how organisations engage their employees.

To summarise it can concluded that there is little consideration of what can be done to measure employee engagement and therefore remains a notable gap in literature regarding what organisations can do to measure engagement. This research thus aims to present a validated theoretical model to measure employee engagement in South Africa.

OBJECTIVES

The aim of this study is to develop a model to measure employee engagement drawing on the commonalities of the various definitions of employee engagement by identifying and examining employee engagement drivers through literature, identifying the measuring criteria of the employee engagement drivers and to present a validated model of employee engagement in South Africa.

The primary objective of this article is to develop a validated and reliable model to measure employee engagement.

The secondary objectives are to:

- Develop a theoretical model by identifying employee engagement constructs from the literature;
- Identify the measuring criteria of these constructs are identified from the literature;
- Validate the variables that measure each of the employee engagement constructs;
- Assess the sampling adequacy of each of the variables;
- Test the applicability of the data for multivariate statistical analysis (such as an exploratory factor analysis);
- Determine the importance of each of the employee engagement constructs;
- Test the reliability of each of the business success influences in the model; and to
- Present an adapted model that can be used to measure employee engagement.

LITERATURE STUDY

A total of 11 employee engagement constructs have been identified from the literature study. These constructs are discussed below.

Table 1: Employee engagement constructs

	Construct	Researchers
1	Cognitive drivers	Shuck & Reio (2013), Mone et al. (2011), London & Mone (2009), Gallup (2011), Brown & Leigh (1996 in Shuck & Reio, 2013), Fredrickson (1998; 2001 as cited by Shuck & Reio, 2013), Kahn (2009 in Shuck & Reio, 2013), Collins (2014), TBS (2011)
2	Emotional Engagement	Shuck & Reio (2013), Hughes & Rog (2008), Gallup (2011)
3	Behavioural Engagement	Shuck & Reio (2013:161), Johnson (2011), Shuck et al. (2011), Parkes (2011), Vance (2006), Shroeder-Saulnier (2010)
4	Feeling Valued and Involved	Johnson (2011), Shuck et al. (20119), Gallup (2011), Konrad (2006), Robinson et al., 2004)
5	Having an engaged leadership team	Johnson (2011), London & Mone (2009), Mone et al. (2011), Kanaka (2012), Gallup (2011), Brunone (2013), Hewitt (2013), Crim & Seijts (2006), Mone et al. (2011)
6	Trust and Integrity	Hughes & Rog (2008), Gallup (2011), Covey (2009), Mone et al. (2011), Schroeder-Saulnier (2010)
7	Nature of my job	Hughes & Rog (2008), Kanaka (2012), Gallup (2011), Custominsight (2013)
8	The connection between individual and company performance	Hughes & Rog (2008), Kanaka (2012), Mone et al. (2009), Gallup (2011)
9	Career Growth opportunities	Hughes & Rog (2008), Mone et al. (2009), Kanaka (2012), Gallup (2011, 2012)
10	Stress free environment	Kanaka (2012), Aveta Business Institute (2014)
11	Change management	Kanaka (2012), (Dicke, Holwerda & Kontakos, 2007), Vance (2006)

Cognitive drivers

The levels of cognitive engagement originate from an employee's appraisal of whether their work is meaningful, safe (physically, emotionally, and psychologically), and if they have sufficient levels of resources to complete their work (Shuck & Reio, 2013:156). In this regard, Shuck & Reio

(2013:156-161) lists research (Brown & Leigh, 1996, Fredrickson, 2001 & Kahn, 1990 in Rich, Lepine & Crawford, 2010:619) that suggests that this psychological interpretation of work reflects:

- A level of engagement, or movement, toward their work;
- Paralleling the broadening of resources as proposed by; and that
- Those who believe their work matters embrace and engage it.

On the other hand, employees who experience negative work circumstances (such as a negative workplace climate or organisational culture) develop a downward spiral of emotions resulting in a narrowing of resources that end in feelings of loneliness, ostracism, and burnout (Shuck and Reio, 2013:158). A negative work environment as highlighted by Murphey (2013) (in Collins, 2014) will make all workers feel irritable, anxious and defensive. This can lead to poor productivity, a lack of motivation and morale and poor communication.

A positive workplace environment is filled with employees who believe they have a purpose at their jobs, they are making a difference, adding to the growth of the company or simply being a valuable part of the team. A negative environment lacks this feeling – the employees will feel they are performing work that does not serve a purpose. Without a sense of purpose, the motivation to complete responsibilities with pride and enthusiasm is hard to come by (Murphey 2013:1 in Collins, 2014).

Shuck and Reio (2013:159) reasons that cognitive engagement revolves around how employees appraise their workplace climate, as well as the tasks they are involved in. As an employee makes an appraisal, they determine levels of positive or negative affect, which in turn influences behaviour. Their study indicates that cognitively engaged employees would answer positively to questions such as “the work I do makes a contribution to the organisation”, “I feel safe at work”, no one will make fun of me here”, and “I have the resources to do my job at the level expected of me.

In a study conducted by Shuck et al. (2011:427) employee engagement is defined as ‘an individual employee’s cognitive, emotional and behavioural state directed toward desired organisational outcomes’. The study proposed that employees who worked in jobs where the demands of a job were congruent with interests and values (job fit) feel as if they emotionally identify with their place of work and would be more likely to be engaged.

Job Fit is defined as the degree to which a person feels their personality and values fit with their current job. Researchers who study job fit suggest that good fit provides opportunities for employees to be involved in individually meaningful work that affects the development of work-related attitudes. Additionally, good fit provides the cognitive stimulus for employees to engage in behaviour directed toward positive organisational outcomes. For example, an employee with high levels of job fit might agree that demands of his or her job allows them to work within a level of emotional and physical comfort and that his or her personal values match those of the job role, conceptually resulting in higher performance, discretionary effort and higher levels of job satisfaction (TBS, 2011).

Notwithstanding, employees who experience good fit derive a degree of meaningfulness from their work, resulting in employees who have the emotional and physical resources to complete their work. Employees who experience job fit within their work roles are more likely to perform their jobs with enthusiasm and energy.

Emotional engagement

Emotional engagement as identified by Shuck and Reio (2013:130) revolves around the broadening and investment of the emotional resources employees have within their influence. When employees are emotionally engaged with their work, they invest personal resources such as pride, trust, and knowledge. The investment of such resources may seem trivial at first glance; however, consider the work of prideful employees who fully trust their work environment. The positive emotions of pride and trust stem from appraisals made about the environment during the previous stage (such as cognitive engagement, this work is meaningful, it is safe for me here at work, and I have the resources to complete my tasks. Crabb (2011:31) states that the driver 'Managing emotions' relates to intrapersonal intelligence: the ability to be self-aware, acknowledge and understand our own thoughts, feelings and emotions. He goes on to say that an individual must be able to fully focus on the tasks that they are undertaking, rather than be distracted by negative or irrelevant thoughts, if they are to develop the right mindset for engagement.

Accordingly, these feelings of positive emotion momentarily broaden an employee's available resources and enhance critical and creative thinking processes often displayed during moments of

engagement. During the emotional engagement process, feelings and beliefs an employee holds influence and direct outward energies toward task completion. Employees who are emotionally engaged in their work answer affirmatively to questions such as, "I feel a strong sense of belonging and identify with my organisation" and "I am proud to work here." (Shuck and Reio: 2013:162).

Hughes and Rog (2008:749) conclude that emotional drivers such as one's relationship with one's manager and pride in one's work had four times greater impact on discretionary work effort than did the rational drivers, such as pay and benefits. Ensuring these drivers are present in the organisation has profound implications for HRM policies and practices with respect to anyone who is in a supervisory capacity.

As mentioned above, in a study conducted by Shuck et al. (2011:427), it may follow that an employee who has job fit feel as if they emotionally identify with their place of work and would be more likely to be engaged. This is referred to as affective commitment.

Affective commitment was defined as a sense of belonging and emotional connection with one's job, organisation, or both (Shuck et al., 2011:430). More than any other type of commitment, affective commitment emphasises the emotional connection employees have with their work and closely parallels the emotive qualities of engagement, including such conditions as meaningfulness and safety, directly paralleling to seminal work by Khan's (1990) conditions of engagement. Such emotive qualities can stimulate employees to willingly engage in behaviour directed toward desired organisational outcomes, emphasising the emotional fulfilment employees experience as a result of being engaged. Emotional fulfilment is an important component of being engaged in work and is indicative of an engaged employee (Shuck et al., 2011:430).

Behavioural engagement

Shuck and Reio (2013:158) reason that behavioural engagement is the most overt form of the employee engagement process. It is often what we can see someone do. Understood as the physical manifestation of the cognitive and emotional engagement combination, behavioural engagement can be understood as increased levels of effort directed toward organisational goals. Resultantly, behavioural engagement can be described as the broadening of an employee's available resources displayed overtly.

Related to this is the "intention to turnover" as identified as an organisational outcome associated with the degree of employee engagement from a study conducted by Shuck et al. (2011:431) is referred to as an employees' intention to engage in a certain type of behaviour, which is a powerful predictor of that employee's future behaviour.

From this context, employee effort in the context of engagement is linked to increased individual effort while engagement occurs one employee at a time and is experienced uniquely through the lens of each employee. Employees who are behaviourally engaged answer positively to questions such as "*When I work, I really push myself beyond what is expected of me*" and "*I work harder than is expected to help my organisation be successful*" (Shuck & Reio; 2013:162).

As noted by Johnson (2011:14) a challenge is that engagement is derived based on how employees feel about their work experiences. Fundamentally, engagement is about whether an employee desires to put forth discretionary effort. Johnson continues and states that engaged employees exhibit the following clear behaviours:

- Belief in the organisation refers to 'sharing the DNA' where employees demonstrate an extremely strong belief in the purpose, values and work of the organisation (Parkes, 2011:5).
- Desire to improve their work an engaged employee is willing to put forth discretionary effort in their work in the form of time, brainpower and energy, above and beyond what is considered adequate (Vance, 2006).
- An understanding of the business strategy – an organisation is aligned when all have a commonality of purpose, a shared vision, and an understanding of how their personal roles support the overall strategy (Shroeder-Saulnier, 2014).
- The ability to collaborate with and assist colleagues (Sorenson, 2013:1). In addition, Harter (2013) states that: "*If you're engaged, you know what's expected of you at work, you feel connected to people you work with, and you want to be there*" and "*You feel a part of something significant, so you're more likely to want to be part of a solution, to be part of a bigger tribe. All that has positive performance consequences for teams and organizations*".
- The willingness to demonstrate extra effort in their work – An employee's willingness to engage in discretionary effort, defined as an employee's willingness to go above minimal job responsibilities, indicates an intention to act that results in behaviour. Effort has been linked

to productivity and profit generation and is increasingly used as leverage for HRD interventions. Increased effort is widely believed to be a behavioural outcome of engagement (Shuck et al., 2011:431).

- The drive to continually enhance their skill set and knowledge base – through training you help new and current employees acquire the knowledge and skills they need to perform their jobs. Employees who enhance their skills through training are more likely to engage fully in their work, because they derive a satisfaction from mastering new tasks (Vance, 2006:13).

In summary, it is concluded that engaged employees are those who are willing to put forth discretionary effort in order to ensure the organisation is successful.

Feeling valued and involved

Konrad (2006:1) suggests that high-involvement work practices can develop the positive beliefs and attitudes associated with employee engagement, and that these practices can generate the kinds of discretionary behaviours that lead to enhanced performance. High-involvement work practices that provide employees with the power to make workplace decisions, training to build their knowledge and skills in order to make and implement decisions effectively, information about how their actions affect business unit performance, and rewards for their efforts to improve performance, can result in a win-win situation for employees and managers.

IES research suggests that if we accept that engagement, as many believe, is 'one step up' from commitment, it is clearly in the organisation's interests to understand the drivers of engagement. The strongest driver of all identified in their research is a sense of feeling valued and involved (Robinson et al., 2004:1).

This view is supported by Johnson (2011:15) who states that this driver '*feeling valued and involved*' is the strongest driver and organisations need to understand the voice of the employee and be aware of employees' needs, issues, and values.

Johnson (2011:15) in support of Robinson et al. (2004) identify several key components that contribute to feeling valued and involved, including involvement in decision-making, ability to voice ideas and managers listen to these views and value employees' contributions, opportunities

employees have to develop their jobs, and the extent to which the organisation demonstrates care for its employees' health and well-being.

The line manager clearly has a very important role in fostering employees' sense of involvement and value – an observation that is completely consistent with IES research (Robinson et al., 2004).

Engaged leadership team

Effective leadership **is** engagement. Having leaders who can help cascade the vision and inspire others to exceptional performance is an equally important part of making engagement flourish in your team, your department, and your company (Brunone, 2013:1).

Hewitt's (2011) analysis of companies with strong financial results shows that one distinguishing feature is the quality of their senior management. In particular, we see that senior managers' levels of engagement are high and their ability to engage others in the organisation, particularly those in middle management, is strong. And it does not stop there: engaged managers are more likely to build engaged teams. In short, engagement starts at the top, and without engaged senior leadership, companies will not be able to engage the hearts and minds of their employees.

With respect to leadership communication it is important that it be frequent and forthright, answering the questions employees are asking. Even if the response is, "We don't know", employees appreciate that their concerns are being heard. Apart from communication as an important element in building the perception of leader effectiveness there are other leadership behaviours that influence employee engagement. Leaders must show that they value employees. Employee-focused initiatives such as profit sharing and implementing work-life balance initiatives are important. Employee engagement is a direct reflection of how employees feel about their relationship with the boss. Employees look at whether organisations and their leaders walk the talk when they proclaim that, "Our employees are our most valuable asset." (Crim & Seijts, 2006:1). This means that leaders:

1. Come across as more **connected with employees** meaning that they:
    - Effectively communicate the organisation's goals and objectives;
    - Consistently demonstrate the organisation's values in all behaviours and actions;

- Appropriately balance employee interests with those of the organisation; and
- Fill employees with excitement for the future of the organisation.

2. Are **performance focussed** that entails:
    - Effectively communicate the organisation's goals and objectives;
    - Empower managers and employees and instil a culture of accountability; and
    - Set aggressive goals at all levels of the organisation.

3. Are **future and development oriented** and focus to:
    - Communicate the importance of spending time on feedback and provide performance coaching;
    - Fill employees with excitement about the future of the organisation;
    - Effectively communicate the skills/capabilities employees must develop for future success; and
    - Invest in long-term growth opportunities, even during difficult times.

Mone et al. (2011:207) state that managers drive engagement when they provide ongoing feedback and recognition to direct and improve performance and have career-planning discussions with their employees. This supports the theory leadership behaviours identified by Crim & Seijts (2006:1) but adds that that the leaders additionally influence employee engagement.

While managers play a role in the day-to-day work experience of their direct reports, the importance of effective senior leadership on employee engagement cannot be underestimated. When senior leaders are themselves engaged, they are more likely to positively affect the engagement of other staff. When these senior leaders communicate frequently and honestly, clearly charting the course for the organisation and letting employees know what is required of them to help make the business successful, employee engagement increases. And when leaders actively endorse initiatives that drive engagement, the effect is multiplied.

Employees also will stay longer and contribute more to organisations where they have good relationships and open dialogue with their immediate supervisors (Johnson, 2011:15).

Trust and integrity

The first job of any leader is to inspire trust. Trust is confidence born of two dimensions: character and competence. Character includes your integrity, motive, and intent with people (Covey, 2009:1). Hughes and Rog (2006:749) define trust and integrity as the extent to which the organisation's leadership is perceived to care about employees, listens and responds to their opinions, is trustworthy, and "walks the talk". Mone et al. (2011:210) found that having a manager employees can trust is a primary driver of engagement.

According to Schroeder-Saulnier (2010:3) building trust through effective communications is an absolute essential. Employees need to trust that their leaders have the capability to make the organisation successful. To win that trust, leaders must show that they have a plan, articulate that plan clearly to employees, and demonstrate that that plan is being implemented effectively. Trust is a two-way street. Leaders must also show that they, in turn, trust employees to help drive organisational success. They must make employees valued partners in a common enterprise. Employees want not only to know what the bigger picture is, but also to feel that they are a part of that picture.

Nature of my job

This driver, "nature of my job" according to Hughes and Rog (2008:749) is defined as the extent of employee participation and autonomy. Encouraging employee accountability is a key aspect. (Kanaka, 2012:65). Advocating the thought of accountability ensures that people are trusted with a job, the responsibility that comes with the job and are expected to complete the job in stipulated time intervals.

Research from Custominsight (2013) indicates that the way to drive engagement to the highest levels, is by empowering employees and by making sure that all employees are held accountable for achieving results. Moreover, these areas are important for attracting, retaining, and motivating the most talented employees. People who value empowerment and accountability will be discouraged in companies that do not promote and support these things. By contrast, poor performers might enjoy the safe haven of a company that does not demand accountability. These are employees who might

have high levels of "satisfaction", but they are likely to be adding little or no value, and even worse, discouraging the talented people around them.

Kanaka (2012:65) goes on to say that encouraging employee participation by encouraging employees to participate in decision-making and other organisational tasks is an important facet every organisation needs to build. Employee participation ensures a high degree of connectivity to the organisation and this connectivity is employee engagement.

Connection between individual and company performance

The engagement driver, "Connection between individual and company performance" is the extent to which employees understand the company's objectives, current levels of performance, and how best to contribute to them (Hughes & Rog, 2008:749). Goal setting, of course, is a critical component of performance management and research from London and Mone (2009) suggest that when managers and employees set goals collaboratively, employees become more engaged.

Kanaka (2012:65) states that top management needs to allow free flow of information, such as industry updates, sectoral updates, quality issues, and compliances, and employee development updates to ensure that employee engagement is a driver of success.

Gallup's research (2011:3) shows that many great workplaces have defined the right outcomes; they set goals for their work groups or work with them to set their own goals. They do not just define the job but define success on the job.

Gallup's (2011:3-4) research also indicates that effective workplaces provide constant clarification of the overall mission of the organisation, as well as the ways in which each individual team member contributes to the achievement of the mission. As human beings we like to feel as though we belong. Individual achievement is great, but we are likely to stay committed longer if we feel we are part of something bigger than ourselves.

Research by Crabb (2011:32) refers to how well the individual's values align to the work that they do and the values and the culture of the organisation. This is referred to as "Aligning Purpose".

It may be concluded that where employee's values are aligned to the organisation's values, individual and organisational benefits are achieved that will ultimately lead to enhanced business performance, employee commitment and a competitive advantage for the organisation.

Career growth opportunities

Career Growth Opportunities refers to the extent to which employees have opportunities for career growth and promotion or have a clearly defined career path (Hughes & Rog, 2008:749). In keeping with this definition, London and Mone (2009) also found that a direct predictor of employee engagement is the extent to which employees are satisfied with their opportunities for career progression and promotion suggesting that employees will feel more engaged if managers provide challenging and meaningful work with opportunities for career advancement. Their research also found that when managers provide sufficient opportunities for training and support regarding career development efforts, they help foster employee development and drive employee engagement.

Gallup (2011:14) also indicates that great workplaces are those in which work groups are provided with educational opportunities that address their development which may include formal classes or simply finding new experiences for them to take on. This research also defines "*opportunities*" as training classes and seminars for some and for others this might mean promotions and increased responsibilities whilst for others this might mean working on special projects and assignments.

Stress-free environment

A stress-free environment as identified by Kanaka (2012: 65) means that employees put their best efforts they can innovate and be creative ensuring optimum output. Most people have found out that when they work in a fun and relaxing atmosphere, they can be more relaxed which means they can be more successful. They can share their personal ideas and experiences and in a healthy working environment, it should be encouraged. All employees should feel valued and appreciated. You can start fun team-building experiences to get things started. Commitment and involvement are also very important factors that contribute to the success factors of businesses and engagement within the workplace. Lots of research studies have proved that people will stay with a company longer if they feel involved and needed. No one wants to work in a stressful and rude environment. Everyone's opinions should be listened to and considered by others. This will lead to a decreased rate of employee turnover, which is definitely a goal for any business (Aveta Business Institute, 2014).

Everyone expects a stress-free environment at the workplace and tends to leave only when there are constant disputes. No one likes to carry tensions back home. An engaged employee does not get time to participate in unproductive tasks instead finishes his assignments on time and benefits the organisation.

Change management

As stated in a white paper on Employee engagement and change management (Dicke et al., 2007:50) "The greater an employee's engagement, the more likely he or she is to 'go the extra mile' and deliver excellent on-the-job performance." Therefore, if employees are engaged during a change management initiative they are likely to have increased "buy-in" and better performance thus, supporting business success. The Paper goes on to state that employee engagement is listed as a primary function to the success of properly implementing a change management initiative and due to employee engagement's close relationship to organisational commitment, understanding organisational commitment's relationship to change management may provide some valuable insight.

Vance (2006:1) indicates that employees who are engaged in their work and committed to their organisations give companies crucial competitive advantages - including higher productivity and lower employee turnover. Thus, it is not surprising that organisations of all sizes and types have invested substantially in policies and practices that foster engagement and commitment in their workforces.

Dramatic changes in the global economy over the past 25 years have had significant implications for commitment and reciprocity between employers and employees and thus for employee engagement. For example, increasing global competition, scarce and costly resources, high labour costs, consumer demands for ever-higher quality and investor pressures for greater returns on equity have prompted organisations to restructure themselves. At some companies, restructuring has meant reductions in staff and in layers of management.

This then relates to the white paper (Dicke et al., 2007:50) which stated that if employees are engaged during a change management initiative they are likely to have increased "buy-in" and better performance thus, supporting business success."

Theoretical model of employee engagement

Based on the theoretical study and the identified constructs (as per Table 1) the theoretical model of employee engagement is presented in Figure.1.

Figure 1: A theoretical model to measure employee engagement

RESEARCH METHODOLOGY

Sampling Procedure

The sample for this study was drawn from two fully accredited private business schools in KwaZulu-Natal and consists of employees or managers in the databases of these institutions and was restricted to 300 respondents. More specifically, the population consists of part-time students enrolled on a Master of Business Administration (MBA) degree or post-graduate business courses. The students are in full time employment. The rationale behind the selection of this sample is the high exposure of the respondent at a managerial level. Since MBA students may be viewed as the future leaders of the economy of our country their perceptions may be deemed very influential and informed due to their strong work experience and educational background.

Questionnaire development

A questionnaire was developed from the literature study and selected employees to indicate the importance of the 11 employee engagement constructs by answering 94 measuring criteria in relation to MI and business success. The questionnaire employed a 5-point Likert scale to indicate the perceptions of the respondents' employee engagement. Although the 11 constructs depict specific components of employee engagement, the synergetic effect when they are interpreted together, provides a coherent picture.

Data Collection

The data collected for this study was through a survey which according to Field (2007:167) is the method of collecting information by asking a set of formulated questions in a predetermined sequence in a structured questionnaire to a sample of individuals drawn so as to be representative of a defined population.

A total of 300 questionnaires were administered independently by the researcher to respondents for completion at the beginning of MBA workshops held in Durban and Johannesburg held by two business schools in KwaZulu-Natal (servicing also Gauteng and a number of other Southern African localities). In order to ensure a high response rate, respondents were requested to complete the questionnaire at the beginning of the workshops where the researcher herself explained the importance and relevance of the study before waiting for questionnaires to be completed. A total of

260 questionnaires were completed and 18 questionnaires were incomplete resulting in a non-response of 22 questionnaires. This resulted in a total response rate of 86.6%.

Data Analysis

The *Statistical Package for the Social Sciences* Incorporated (SPSS) Version 22 was used to analyse the data statistically. Similar research by Chummun (2012) successfully employed the following statistical procedures and decision criteria:

- Exploratory Factor Analysis (EFA). Due to its exploratory nature, factor loadings of 0.4 and higher were considered to validate the items that measure each of the MI's business success influences (Field, 2007: 668) (Objective 3).
- The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was utilized to ensure that the sample used is adequate. Field (2007:735) suggests that a KMO value of 0.6 should be the minimum acceptable value if exploratory factor analysis is considered (Matlab, 2010 in Chummun, 2012). These values are regarded to be mediocre, while more favourable values are between 0.7 and 0.8. Values between 0.8 and 0.9 are very favourable while ultimately, values above 0.9 are superb) (Objective 4).
- Bartlett's test of sphericity was used to determine if the data is suitable to employ multivariate statistical analysis. This study follows advice by Field (2007:724) and sets a maximum value of 0.005. Values below 0.005 signify that the data is indeed suitable for multivariate statistical analysis, in this case exploratory factor analysis (Objective 5).
- The variance explained by the factor analysis serves as indicator to determine the importance of each of the constructs to measure employee engagement (Objective 6). Field (2007) indicated that a variance of 60% and higher is regarded to be a good fit to the data. This study aims to achieve a good fit to the data, thus aiming to achieve 60% of variance per factor.
- The reliability of the employee engagement constructs is measured with the Cronbach alpha coefficient. Satisfactory reliability coefficients exceed 0.70 (Field, 2007:668). However, a secondary lower reliability coefficient of was set at 0.58. This was done because Cortina (1993:98) confirmed in his research that when ratio and interval scales are used (such as the Likert scale used in this questionnaire), it does warrant a lower reliability coefficient (Objective 7).

Statistical validation

Each employee engagement construct is validated by calculating the KMO values, Bartlett's tests of sphericity, the variance explained by the specific construct in the factor analysis and the reliability of the specific construct. In addition, measuring criteria with factor loadings below 0.40 are omitted from the analysis while strong dual-loading criteria are also omitted because of their dualistic nature (Fields, 2013). This method also determined if all the measuring criteria loads as one factor, meaning that the criteria measure the specific construct as one construct. In cases where more than one factors are identified, the sub-factors are identified and labelled as individual sub-factors of the specific employee engagement construct (Fields, 2013).

RESULTS

The results pertaining to each of the employee engagement constructs are discussed below. The statistical results are summarised in Table 2.

Cognitive drivers

Only one factor was identified by the factor analysis. The analysis further showed that Question 3 (No one will make fun of me) does not contribute to measuring the construct because it has a low factor loading (Below 0.40). As a result, this question was omitted from the analysis. All the other questions loaded onto the factor, signifying their validity in measuring this factor. The KMO and Bartlett test returned favourable values while the variance explained is satisfactory at 64.2%. The factor has a satisfactory reliability coefficient of 0.80.

Table 2: KMO, Bartlett's test, reliability and variance explained

CONSTRUCT	SUB-CONSTRUCT	KMO	BARTLETT	CRONBACH ALPHA	VAR. EXPL.
Cognitive drivers	***	0.794	0.000	0.838	64.2%
Emotional engagement	***	0.926	0.000	0.944	67.1%
Behavioural engagement	Employee perceptions Employer perceptions	0.900	0.000	0.910 **0.373**	44.4% 20.7%
Feeling valued and involved	***	0.857	0.000	0.880	63.6%
Having an engaged leadership team	***	0.951	0.000	0.966	71.1%
Trust and Integrity	***	0.937	0.000	0.953	76.1%
Nature of my job	Employment enablers Managerial influences	0.845	0.000	0.846 0.823	34.5% 34.4%
Connection between individual and company performance	***	0.878	0.000	0.926	66.3%
Career growth opportunities	***	0.936	0.000	0.949	71.4%
Stress-free environment	***	0.814	0.000	0.944	81.2%
Change management	***	0.880	0.000	0.960	71.3%

** Unreliable (α<0.70); *** No sub-factors identified*

Emotional engagement

The analysis of the construct dealing with emotional engagement showed that two statements could be omitted from the analysis since they both had low factor loadings (below 0.40). These questions were 11 (I take pride in my work) and 14 (I have a best friend at work). All the remaining questions loaded onto the factor, signifying their validity in measuring this factor. The KMO and Bartlett test showed very satisfactory values, and the factor explained a high 67% of the variance. In addition, the factor is deemed very reliable with an alpha coefficient of 0.944.

Behavioural engagement

The construct behavioural engagement consists of two sub-factors. The analysis revealed that none of the questions could be omitted from the analysis. The two sub-constructs are *Employee perceptions* (explain 44.4% of the variance) and *Employer perceptions* (explaining 20.7% of the variance). However, it is noteworthy that *Employer perceptions* is not a reliable factor (α= 0.373). The KMO and Bartlett test returned very acceptable values. None of the questions were discarded because they all loaded onto the two sub-factors, signifying their validity in measuring these factors.

Feeling valued and involved

All items for the construct *Feeling valued and involved* loaded under one construct, which explained 63% of the overall variance. The KMO test returned an excellent value above 0.8 thereby indicating the sample is adequate. The Bartlett test supported the selection of factor analysis as analytical tool. This factor is regarded to be reliable with an alpha coefficient of 0.880. The analysis shows that one factor is prevalent, and that all the questions are valid in measuring this factor.

Engaged leadership team

The factor analysis revealed a single factor labelled *Engaged leadership team*. The KMO and Bartlett tests returned satisfactory values whilst it is worth noting the factor is deemed to be reliable with an alpha coefficient of 0.880. This factor explains variance of 63.6%. All the questions loaded onto the factor, signifying their validity in measuring this factor.

Trust and integrity

Only one factor was identified by the factor analysis. The factor is labelled *Trust and integrity*. Favourable values were returned from the KMO and Bartlett tests, indicating the sample was adequate and data was suitable to be employed in multivariate statistical analysis. The factor explained a high variance of 76.1%. In addition, the factor also returned a high Cronbach alpha coefficient of 0.937, signifying high reliability. All the questions loaded onto the factor, signifying their validity in measuring this factor.

Nature of my job

Similar to the construct *Behavioural engagement*, the construct *Nature of my job* consists of two sub-factors namely *Employment enablers* and *Managerial influences*. The sub-factor *Employment enablers* explain 34.5% of the variance and the sub-factor *Managerial Influences* explain 34.4% of the variance, signifying that they are both of equal importance to explain the construct *Nature of my job*. Both sub-constructs are also deemed reliable with Cronbach alpha coefficients of 0.846 and 0.823 for *Employment enablers* and *Managerial influences*, respectively. Both the KMO and Bartlett tests returned acceptable values. All the questions loaded onto either one of the factors, signifying their validity in measuring these factors.

Connection between individual and company performance

One factor was extracted for the construct *Connection between individual and company performance*. The variance explained is 66.3%, and the factor has a high reliability coefficient of 0.926. The KMO test returned an excellent value of 0.878 while the Bartlett test revealed the data is indeed suitable for multivariate statistical analysis. All the questions loaded onto the factor, signifying their validity in measuring this factor.

Carer growth opportunities

All the questions loaded onto the construct *Career growth opportunities*, signifying their validity in measuring this factor. The factor explained a variance of 71.4%, indicating a good fit to the data (Field, 2007). The KMO test revealed an excellent value of 0.936 indicating superb sample adequacy, while the Bartlett test was significant indicating data was is suitable to perform a factor analysis. The reliability of the factor is excellent with a coefficient of 0.949.

Stress-free environment

The construct *Stress-free environment* revealed only one factor. All the questions loaded onto the factor, signifying their validity in measuring this factor. The favourable KMO value of 0.814 indicated an adequate sample while the Bartlett test was also suitably below the required 0.005. The factor explains a variance of 81.2% which is regarded to be a very good fit to the data (Field, 2007). This factor is deemed very reliable with an alpha coefficient of 0.960.

Change management

The construct *Change management* explained a variance of 71.3%. It also displays a very high reliability with an alpha coefficient of 0.960. Both the KMO and Bartlett tests revealed favourable results, and all the questions loaded onto the factor. Resultantly, these questions are deemed valid in measuring this factor.

Discarded measuring criteria

The statistical process to validate the theoretical model identified a total of three questions in the questionnaire that could be omitted from the analysis. These questions did not load onto a specific factor and had low factor loadings (below the required 0.40 factor loading set in this study). These non-relevant criteria are shown in Table 3.

Table 3: Deleted measuring criteria (questions) in questionnaire

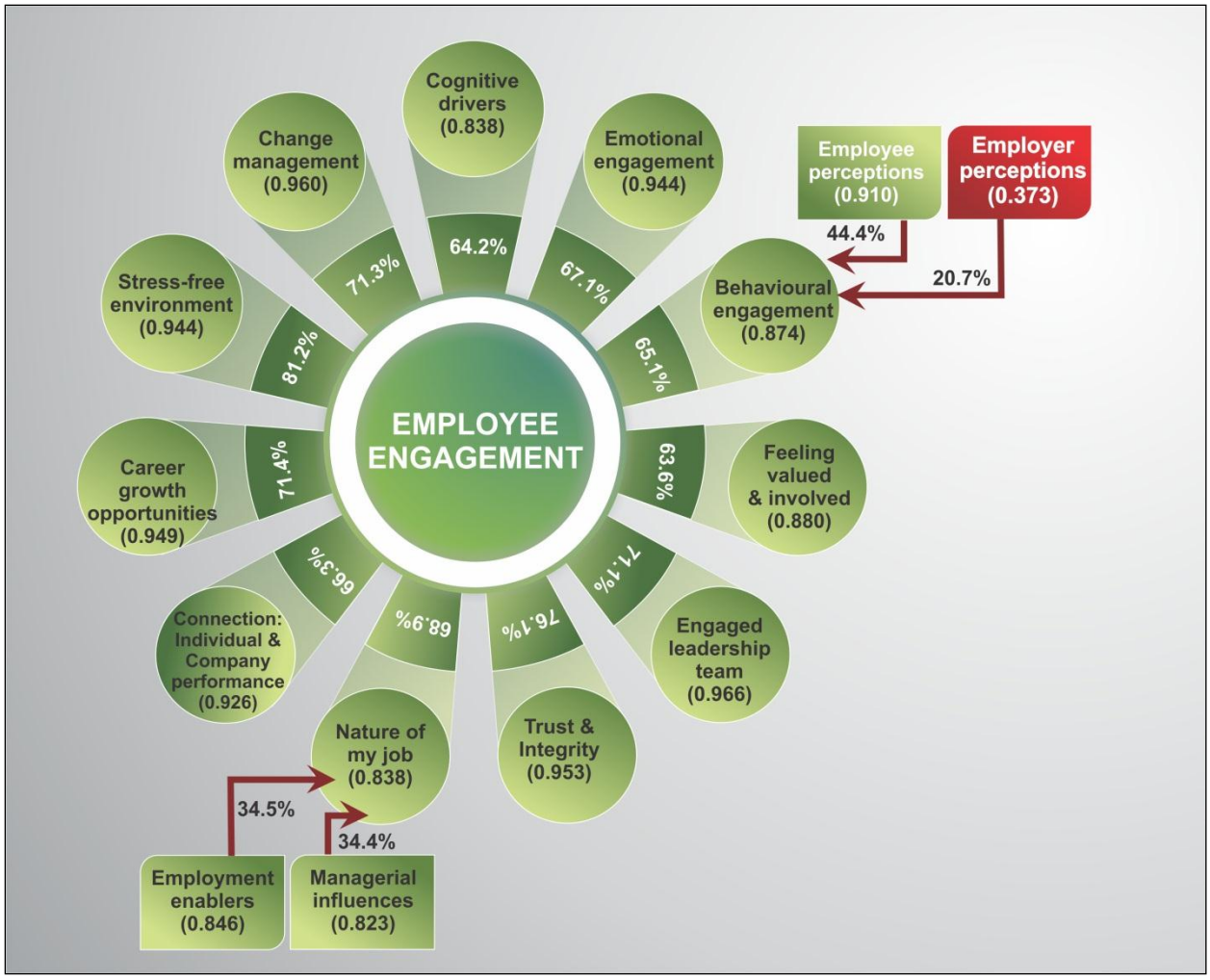
No.	Measuring Criteria
3	No one will make fun of me
11	I take pride in my work
14	I have a best friend at work

VALIDATED MODEL OF EMPLOYEE ENGAGEMENT

Figure 2 shows the validated model to measure employee engagement. The statistical analysis to validate the theoretical model shows that the original theoretical model (see Figure 1) contains more than just 11 constructs to measure employee engagement. It also contains sub-constructs that pertain to some of the constructs. These constructs and sub-

constructs are shown in Figure 2. The reliability of the constructs and sub-constructs were also determined. Some of sub-actors did not yield unsatisfactory Cronbach Alpha coefficients, meaning that they are not reliable. In this regard Du Plessis (2010) points out that these sub-constructs with lower reliability coefficients are less likely to present themselves in a repetitive study. Only one sub-construct (Employer perceptions: Cronbach Alpha = 0.373) falls into the low reliability category should therefore be interpreted bearing this constraint in mind (see Figure 2).

Figure 2: Validated model of employee engagement



CONCLUSIONS

From the study, the following are concluded that:

- The factors' returned high cumulative variances in excess of a 60% which is regarded to be a good fit of the data" (Chummun, 2012; Shukia, 2004).

- The reliability of the data employed in this measuring instrument is high (exceeding 0.80 with ease) for all the factors. Only one sub-factor (Employer perceptions) has low reliability (0.373). This sets the scene to continue with the validation of the questionnaire.
- Both the Bartlett test of Sphericity and the Kaiser-Meyer-Olkin Measure of Sample Adequacy returned high values signifying that the sample was adequate and that the data were suitable to perform factor analysis.
- The questionnaire used is a valid research tool and suitable to be used to measure employee engagement in South Africa.

SUMMARY

The primary objective of this article was to develop a theoretical model and to validate this model statistically to measure employee engagement amongst managers in South Africa (see Figure 3). The study set eight secondary objectives to achieve the primary objective. All of them were reached. This means that the model also resulted in a validated questionnaire to measure employee engagement. The questionnaire was tested and ensured that it is valid for use. The study can, therefore, continue to measure the employee engagement of the managers and thereafter make recommendations to positively influence employee engagement as managerial tool in business success.

REFERENCES

Aveta Business Institute. (2014). Six Sigma certification. www.sixsigmaonline.org Date of access: 14 June 2014.

Brunone, C. (2013). Leadership Development vs. Employee Engagement. http://www.blessingwhite.com/content/articles/enews/June2013.asp?pid=2 Date of access: 10 May 2013.

Chummun, B.Z. (2012). Evaluating business success in the Microinsurance industry of South Africa. (Thesis – PhD) Potchefstroom: North-West University).

Collins, M. (2014). Recruitment & HR Services Group. www.collinsmnicholas.ie/blog/?p==660. Date of access: 10 May 2013.

Covey, S.M.R. (2009). How the Best leaders Build Trust. Chicago: Linkage's Eleventh Annual Best of Organization Development Summit. http://www.leadershipnow.com/ CoveyOnTrust.html Date of access: 17 June 2014.

Crabb, S. (2011). The use of coaching principles to foster employee engagement, *The Coaching Psychologist*, 7(1), pp27-34.

Crim, D. & Seijts, G. (2006). What engages employees the most or, the ten Cs of employee engagement. *Ivey Business Journal*. http://iveybusinessjournal.com/ topics/the-workplace/what-engages-employees-the-most-or-the-ten-cs-of-employee-engagement Date of access: 17 June 2014.

Custominsight. (2013). *What Drives the Most Engaged Employees*? http://www.custominsight.com/employee-engagement-survey/research-employee-engagement.asp Date of access: 14 June 2014.

Dicke, C., Holwerda, J. & Kontakos, A.M. (2007). *Employee Engagement. What do we really know? What do we need to know to take Action*? Paris: CAHRS. http://www.uq.edu.au/vietnampdss/docs/July2011/EmployeeEngagementFinal.pdf Date of access: 17 June 2014.

Du Plessis, J.L. (2010). NWU Statistical Consultation Services. Potchefstroom: North-West University.

Field, A. (2007). *Discovering statistics using SPSS*. 3rd ed. London: Sage.

Fields, Z. (2013). *A conceptual framework to measure creativity at tertiary educational level*. (Thesis - PhD) Potchefstroom: North-West University).

Gallup. 2011. *Employee Engagement: What's your employee ratio?* Washington: Gallup.

Harter, J. (2013). *Chief scientist of workplace management and wellbeing*. Washington: Gallup.

Hewitt, A.O.N. (2011). The multiplier effect: Insights into how senior leaders drive employee engagement higher. http://www.aon.com/attachments/thought-leadership/Aon-Hewitt-White-paper_Engagement.pdf

Hughes, J.C. & Rog, E. (2008). Talent Management: A strategy for improving employee recruitment, retention and engagement within hospitality organisations, *International Journal of Contemporary Hospitality Management*, 20(7), pp 743-757.

Johnson, M. (2011). Workforce Deviance and the Business Case for Employee Engagement, *Journal for Quality & Participation*, 34(2), pp 11-16.

Kanaka, M.L.G. 2012. Employee Engagement: A corporate boon, 10 ways for effective engagement, *Advances in Management*, 5(2), pp 64-65.

Konrad, A.M. (2006). Engaging employees through high-involvement work practices. *Ivey Business Journal*. http://iveybusinessjournal.com/topics/the-workplace/engaging-employees-through-high-involvement-work-practices Date of access: 17 June 2014.

Mone, E., Eisinger, C., Guggenheim, K., Price, B. & Stine, C. (2011). Performance Management at the Wheel: Driving Employee Engagement in Organisations, *Journal of Business and Psychology*, 26(2), pp 205-212.

Parkes, L. (2011). *Employee engagement. Igniting Passion through purpose, participation and progress.* (***In***: California State University. http://www.fullerton.edu/cice/Documents/2013CEReport.pdf Date of Access: 1 Sep 2014).

Robinson, D., Perryman, S. & Hayday, S. (2004). The drivers of employee engagement. London: Institute for employment studies. http://www.employment-studies.co.uk/pubs/summary.php?id=408 Date of access: 17 June 2014.

Shroeder-Saulnier, D. (2010). Employee engagement: Drive organisational effectiveness by building trust. Right Management: A manpower company. http://www.right.com/thought-leadership/e-newsletter/drive-organizational-effectiveness-by-building-trust.pdf Date of access: 17 June 2014.

Shuck, B. & Reio, G. (2013). Employee Engagement and well-being: A moderation model and implications for practice, *Journal of Leadership and Organisational Studies,* 21(1), pp 43-58.

Shuck, B., Reio, G., & Rocco, S. (2011). Employee engagement: an examination of antecedent and outcome variables, *Human Resource Development International,* 14(4), pp 427-445.

Shukia, P. 2004. *T-Test and Factor analysis*. University of Brighton. http://www.pauravshukla.com/marketing/research-methods/t-test-factor-analysis.pdf. Date of access: 20 April 2011.

Sorenson, S. (2013). Dont Pamper employees-engage them. http://businessjournal.gallup.com/content/163316/don-pamper-employees-engage.aspx . Date of access: 17 June 2014

TBS. (2011). *Public service employee survey: Focus on employee engagement*. http://www.tbs-sct.gc.ca/pses-saff/2011/engage-mobil-eng.asp Date of access: 10 June 2013.

Thayer, S.E. (2008). *Psychological climate and its relationship to employee engagement and organisational citizenship behaviours*. http://www.academia.edu/6709919/Employee_Engagement_and_Organizational_Effectiveness_The_Role_of_Organizational_Citizenship_Behavior.

The Corporate Executive Board. (2004). *Driving performance and retention through employee engagement*. New York: The Corporate Leadership Council.

Towerswatson. (2012). Global Workforce Study: Engagement at risk: driving strong performance in a volatile global environment. http://www.towerswatson.com/Insights/IC-Types/Survey-Research-Results/2012/07/2012-Towers-Watson-Global-Workforce-Study Date of access: 10 May 2013.

Treasury Board of Canada Secretariat ***See*** TBS

Vance, R.J. (2006). *Employee Engagement and Commitment*. New York: SHRM Foundation. http://www.vancerenz.com/researchimplementation/uploads/1006employeeengagementonlinereport.pdf Date of access: 12 June 2014.

CHAPTER 3

ARTICLE 2:

VALIDATING A MODEL TO MEASURE EMPLOYEE ENGAGEMENT OF SOUTH AFRICAN MANAGERS

This article was submitted in September 2014 to the *South African Journal of Economic and Management Sciences* (Thompsons ISI listed). It is currently under review.

VALIDATING A MODEL TO MEASURE EMPLOYEE ENGAGEMENT OF SOUTH AFRICAN MANAGERS

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Abstract

The article reports on research to develop a model to measure employee engagement. In addition to presenting the developed model, the article also addresses a higher order objective, namely the validity of the model. The research employed exploratory factor analysis in addition to validity measures to achieve these objectives. A total of 300 questionnaires using a five-point Likert scale were administered independently to the respondents for completion. Some 260 questionnaires were received back of which 18 were unusable due to incompleteness, and a further non-response of 22 questionnaires resulted in an effective response rate of 86.6%. The factor analysis identified seven factors after eliminating criteria due to low factor loadings and strong cross-loadings, while explaining 69% of the variance. The validity measures were also successful and the model to measure employee engagement within an organisation showed strong validity in addition to excellent reliability (exceeding a Cronbach alpha of 0.9). The research is of value to now empower managers who can measure engagement in their organisations, while academia should also benefit from the strong academic foundation of the model.

Keywords: Employee engagement, management, reliability, validity, framework, model

1 INTRODUCTION

Employee engagement is described by Mandala (2014) as:
"the act of committing, pledging or engaging oneself" or *"the state of being bound emotionally or intellectually to a course of action or to another person or persons".*

Viljoen (2007) (in Mandala, 2014), in similar fashion, defined employee engagement as: *"the trait of sincere and steadfast fixity of purpose, a man of energy and commitment"* and *"the act of binding oneself to a course of action."*

Mandala (2014) further states that employee engagement is a "concept that is generally viewed as managing discretionary effort, that is, when employees have choices, they will act in a way that furthers their organisation's interests. An engaged employee is a person who is fully involved in, and enthusiastic about, his and her work." This view is supported by Gallop (2012) who states that the world's top-performing organisations have a high understanding that employee engagement is a formidable force that drives performance outcomes. In the best organisations, engagement is more than a human resources initiative; it is a strategic foundation for the way they do business. The research by Gallup shows that engaged employees are more productive, more profitable, more customer focused, act safer in the work environment, and are more likely to withstand temptations to leave the employ of the organisation. The best-performing companies know that an employee engagement improvement strategy linked to the achievement of corporate goals will help them win in the marketplace. Employees with the right talent and engaged with their work are always a scarce resource. So how does one retain the right blend of talent and engaged employees in the organisation? Today, organisations have no other choice but to nurture and pamper them. Firms need to identify what ticks the employees to stay back in the organisation and extract the best out of their talent pool. Employees should be engaged and the employer should be a brand that attracts talented employees and retain them. Employee engagement is termed a psychological state in which employees feel a vested interest in the company's success and are both willing and motivated to perform on levels that exceed the requirements of the job. An employee who is engaged is aware of the business context and work for the benefit of the firm. The firm, in turn, must work to develop and nurture engagement, which is a two-way relationship between the employer and employee (Saintgifts, 2014).

Further research on the value of employee engagement is reported on in the 2011 Employee Engagement Report that reflects the results obtained from nearly 11 000 interviews with human resource and line managers from North America, India, Europe, Southeast Asia, Australia, New Zealand and China. The report shows that (Blessingwhite, 2011):

- 31% of employees are engaged, while 17% are disengaged.
- There is a strong correlation between engagement levels and age, role/level, and tenure in the organisation.
- Although there is an increase in seeking employment outside the organisation (compared to 2008), engaged employees plan to "stay for what they give to the organisation", while the disengaged stay for what they "can get out of the organisation".
- Trust in executives appears to have more than twice the impact on engagement levels than trust in immediate managers does.
- Engagement surveys without visible follow-up action may actually decrease engagement levels, suggesting that organisations should think twice before flipping the switch on measurement without 100% commitment for action planning based on the results.

Therefore, the central issue of this article is to focus on employee engagement and disengagement and its impact on employee retention in the workplace. More specifically, the article focuses on the measurement of employee engagement in the organisation as key managerial tool in organisational performance and productivity.

2 PROBLEM STATEMENT

The general trend in employee engagement research focuses mainly on how organisations engage their employees, what they should do to facilitate engagement and engagement in the organisation in general. Limited research seems to focus on the accurate measurement of employee engagement, and even less on developing accurate and usable engagement measuring tools that managers can employ to measure the levels of engagement within their organisation or department. In addition, there seems to be very limited formal research on validated measuring tools or models to measure employee engagement. This is even more so in South Africa, and very little information seems to be available to managers who seek a validated model to employ in measuring employee engagement. This study then aims to fill this knowledge gap and aims to resolve the problem scientifically by providing managers with a simplified and validated managerial tool to measure employee engagement in their organisations.

3 RESEARCH OBJECTIVES

The primary objective of this article is to simplify the validated model to measure employee engagement.

To achieve the primary objective, the following secondary objectives are formulated, namely to:

- perform a theoretical study to substantiate the statistics to simplify the validated model;
- measure the sample adequacy to ensure that the sample employed is suitable for the multivariate analysis;
- calculate the sphericity to ensure that inter-correlations between variables are not negatively influencing the statistical analysis;
- perform exploratory factor analysis to determine and confirm the identified factors;
- identify and discard possible low loading and strong cross-loading criteria;
- present a simplified model to measure employee engagement; and to
- empirically validate the model to measure employee engagement.

4 VALIDITY

Validity refers to the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure. While reliability is concerned with the accuracy of the actual measuring instrument or procedure, validity is concerned with the study's success at measuring what the researchers set out to measure (CSU, 2014). This means that the degree of validity determines to what extent the research truly measures what it intended to measure, and by doing so, reflects on how truthful the research results are (Golafshani, 2003:601).

4.1 External and internal validity

In their seminal work, over 40 years ago, Campbell and Stanley (1966) (in Steckler & McLeroy, 2008:9-10) explained that e*xternal validity* refers to the extent to which the results of a study are generalisable or transferable. (Shuttleworth (2013), in this regard, specifically points out that this entails to what extent an effect in research can be generalised to populations, application settings and measurement variables. This leads to two distinct types of external validity when considering the experimental design of a study, namely the *population validity* (does the sample population represent the entire population, and whether the sampling method is acceptable) (Shuttleworth, 2013) and the *ecological validity* (validity of the methods, materials and setting of the study must approximate the real world that is being examined) (Shadish, Cook & Campbell, 2002). Gaskin (2014:7) indicates that population validity is achieved when significant factor loadings are realised.

Internal validity refers to the cause and effect that result from the study's experimental design (Shuttleworth, 2013). This includes reference to the:

1. rigor with which the study was conducted (for example, the study's design, the care taken to conduct measurements and decisions concerning what was and was not measured); and the
2. extent to which the designers of a study have taken into account alternative explanations for any causal relationships they explore (Huitt, 1998).

Studies that do not explore causal relationships should consider only the first reference above on the rigour of the study execution when assessing the internal validity.

4.2 Criterion validity

Criterion validity measures whether a specific test or measuring instrument contains or reflects the required set of abilities. It consists of *concurrent* and *predictive validity* (Knowledgebase, 2014).

- *Concurrent validity* measures the test against a validated and acceptable benchmark test. Strong criterion validity is indicated by high correlations between the test and the benchmark test.
- *Predictive validity* measures how well a test or measuring instrument predicts the abilities it tests for. This requires testing respondent groups for a certain construct and then comparing them with results obtained at some point in the future (Shuttleworth, 2013).

4.3 Construct validity

4.3.1 Translation validity

4.3.1.1 Face validity

Face validity is concerned with how a measure or procedure appears. Is the method employed a reasonable one that would gather the needed information the researchers are attempting to obtain? Is the study properly designed and should the study yield reliable results (CSU, 2014)? It is important to note that, unlike content validity, face validity does not depend on established theories for support (Fink, 1995). *Face validity* is an approved method to use in order to establish the content validity of a test (CollegeBoard, 2012). In this regard, Gaskin (2014:9) points out that, in practice, face validity refers to the fact that the extracted factors must make sense and that variables of a similar nature load together on the same factor.

4.3.1.2 Content validity

Content validity is based on the extent to which a measurement reflects the specific intended domain of content (Carmines & Zeller, 1991:20). Content validity addresses the alignment between test questions and the subject area (the performance domain) the questions intend to assess (CSU, 2014). Content validity is the estimate of how much a measure represents every single element of a construct. A number of statistical programs (such as LISREL, AMOS and other confirmatory factor analysis and structural equation modelling software) are able to calculate these measures quantitatively, presenting, for example, the average variance extracted and the composite reliability (Farrel, 2009:2;9).

4.3.2 Criterion-related validity

Criterion-related validity, also referred to as instrumental validity, is used to demonstrate the accuracy of a measure or procedure by comparing it with another measure or procedure that has been demonstrated to be valid. Practically, as explained by Knowledgebase (2014), it means that if a hands-on driving test proved to be an accurate test of driving skills, researchers could compare the scores of the driving test with scores from the written driving test. If the correlation between the two tests is high, the written test can be validated by using a criterion-related strategy.

4.3.2.1 Construct validity explained

Construct validity refers to: "The degree to which inferences can legitimately be made from the operationalisations in your study to the theoretical constructs on which those operationalisations were based" (Knowledgebase, 2012). This means that construct validity seeks agreement between a theoretical concept and a specific measuring device or procedure. In this study, for example, inventing a new model to measure employee engagement might require significant effort to understand "employee perceptions of their employer" in order to reach an acceptable level of construct validity.

Construct validity can be broken down into two sub-categories: *convergent validity* and *discriminate validity*. Convergent validity is the actual general agreement among ratings, gathered independently of one another, where measures should be theoretically related. Discriminate validity is the lack of a relationship among measures that theoretically should not be related. A study achieves construct validity by following the next three steps (Carmines & Zeller, 1991:23):

1. The theoretical relationships must be specified;

2. The empirical relationships between the measures of the concepts must be examined; and
3. The empirical evidence must be interpreted in terms of how it clarifies the construct validity of the particular measure being tested.

Statistically, the construct validity can be determined by using *convergent* and *discriminant* validity. It is important to note that evidence for both convergent and discriminant validity is required to claim construct validity. By demonstrating that both convergent and discriminant validity exist in a study, construct validity can be claimed. However, alone neither one is sufficient to establishing construct validity. This means that convergent and discriminant validity (as two inter-locking propositions) measure constructs that (Knowledgebase, 2014):

- should theoretically be related to each other (showing a correspondence or convergence between similar constructs); and
- theoretically *should* not be related to each other (to discriminate between dissimilar constructs).

Gaskin (2014:6-8), in support of Hill and Hugh (2007:340), points out that both convergent and discriminant validity could be determined by examining 1) the rotated factor matrix and the factor loading of the extracted factors, and 2) the inter-correlations between factors.

In order to perform discriminant validity measures, a typical correlation coefficient such as the Pearson correlation coefficient or Spearman correlation coefficient is calculated in order to examine the patterns of inter-correlations that exist in the data (Andrews, 2014). Correlations between theoretically similar measures should be 'high' ($p>0.50$), while correlations between theoretically dissimilar measures should be 'low' ($p<0.30$) (Mathbits, 2014; Knowledgebase, 2014). In addition, Gaskin (2014:7) points out that the inter-correlations between the factors should also be lower than 0.70 to signify satisfactory discriminant validity.

Regarding convergent validity, high factor loadings within a specific factor indicate convergence within that specific factor (Farrel, 2009:5). In addition to a high factor loading on one factor, low factor loadings of the item on the other extracted factors indicate that this item discriminates against these factors. (From there the importance to weed out cross-loading items in excess of 0.20 in the final factor analysis.)

Claiming construct validity requires evidence that satisfactory validity exists in both discriminant validity and convergence validity (Gaskin, 2014:6; Farrel, 2009:5).

4.3.3 Threats to construct validity

A threat to validity is described (Knowledgebase, 2014) as any event or occurrence that creates uncertainty to a study reaching a conclusion that your programme was well operationalised. According to the seminal work by Cook and Campbell (1979), the following important construct validity threats exist (cited in Knowledgebase, 2014):

- **Inadequate pre-operational explanation** of constructs results when constructs are poorly developed, not articulated by acknowledged methods and no feedback was obtained from experts on the operationalisation of the study;
- **Mono-method bias** endangers validity by not demonstrating (a pilot) that the measures used behave as theoretically expected; and
- **Social threats** to construct validity:
    - Hypothesis guessing;
    - Evaluation apprehension; and
    - Experimenter expectations.

4.4 Kaiser-Meyer-Olkin (KMO) measure of sample adequacy

Kaiser-Meyer-Olkin (KMO) is defined by Mediaspace (2007) as an index to compare the magnitudes of the observed correlation coefficients to the magnitudes of the partial correlation coefficients. The KMO measure of sample adequacy tests whether the partial correlations among variables are small. The KMO can be calculated for individual and multiple variables and represents the ratio of the squared correlation between variables to the partial correlation of variables (Naidoo, 2011:19). The KMO measure of sample adequacy determines whether the relationship between variables returns a value between 0 and 1.

A value of 0 indicates that the sum of partial correlation is large relative to the sum of correlations, indicating diffusion in the pattern of correlations. A value close to 1 indicates that patterns of correlation are relatively compact and therefore factor analysis should yield distinct and reliable factors.

According to Du Plessis (2009:26), Du Plessis (2010), and Field (2007:640), the factor analysis is likely to be inappropriate for values smaller than 0.5. For factor analysis to be considered, a KMO value of 0.6 should be present; however, values between 0.5 and 0.7 are considered mediocre. Values between 0.7 and 0.8 are considered good, while values between 0.8 and 0.9 are considered excellent. Values between 0.9 and 1 are considered superb values. The larger the KMO value, the more reliable the factor analysis for this particular sample size is. Positive outcomes on these tests validate the use of factor analysis as a statistical tool (Du Plessis, 2009:26).

The KMO test for this study showed very favourable values (0.953 in round 1, 0.954 in round 2 and round 3 and 0.956 in round 4). This is evident from the KMO that remained highly satisfactory with values in excess of 0.90 in all four instances.

4.5 Bartlett's test of sphericity

Sphericity is a general condition of compound symmetry. This holds true when both the variables across conditions are equal and the co-variances between pairs of conditions are equal. Another indicator of the strength of the relationship among variables is Bartlett's test of sphericity. This test examines whether a variance-covariance matrix is proportional to the identity matrix. Therefore, in essence, the Bartlett's test of sphericity is an indicator of the strength of the relationship among variables and an indicator of the suitability of the data towards a multivariate statistical technique such as factor analysis (Bentler & De Leeuw, 2010). It is a test statistic used as gatekeeper for further analysis.

The Bartlett's test examines the hypothesis that the variables are uncorrelated in the population. Therefore, the population correlation matrix is an identity matrix; each variable correlates perfectly with itself ($r = 1$), but has no correlation with the other variables ($r = 0$) (Mediaspace, 2007). Bartlett's test of sphericity is used to test the null hypothesis that the variables in the population correlation matrix are uncorrelated (Coakes & Steed, 1997). The observed significance level is .0000. It is small enough to reject the hypothesis. It is concluded that the strength of the relationship among variables is strong. It is a good idea to proceed with a factor analysis because the data should yield a p-value smaller than 0.0001. This indicates that the correlation between the variables is sufficient for factor analysis (Du Plessis, 2009:58).

In this study, the Bartlett's test of sphericity remained below the required level of 0.005 and is regarded as significant and very favourable. This indicates that the relationship among variables is

strong and that the data is suitable to be subjected to multivariate statistical analysis such as factor analysis.

4.6 Exploratory factor analysis (EFA)

According to Costello and Osborne (2005:5), factor analysis is a technique for the identification of groups and clusters of variables. This technique has three main uses, namely to understand the structure of a set of variables, to construct a questionnaire to measure an underlying variable and to reduce a dataset to a more manageable size while retaining as much of the original information as possible. The underlying dimensions are known as factors and/or latent variables. Factor analysis achieves the parsimony by explaining the maximum amount of common variance in a correlation matrix using the smallest number of explanatory concepts (Zikmund, 2008:134).

In exploratory factor analysis, the normalised Varimax rotation is a suitable rotational method to use on the factors from the component matrix. This is because this method of rotation attempts to maximise the dispersion of factor loadings within the factors (Field, 2007:796).

As stated earlier, exploratory factor analysis, employing a Varimax rotation, was selected because of its ability to maximise variance explained and the decision criteria for simplifications (Bisschoff & Moolla, 2014:1114) were factor loadings of 0.40 and higher (Fields & Bisschoff, 2013a:57). The variance explained for this study remained above the required 60% at 69.74%, indicating a good fit to the data (Field, 2007:672)

4.7 Reliability

Joppe (2000) (in Golafshani, 2003:598) defines reliability as "...the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable". This view is supported by Knowledgebase (2014), who states that reliability deals with "consistency" or "repeatability" of your measures. In this regard, Field (2007:674-675) states that an instrument, such as a questionnaire, which produces different scores every time it is used under the same conditions, has low reliability. Reliability needs to be measured quantitatively, and according to Santos (1999:2), one of the most popular reliability statistics is Cronbach's alpha, as published by the mathematician Cronbach in 1951. Cronbach's

alpha determines the internal consistency or average correlation of items in a survey instrument to gauge its reliability (Wuensch, 2009:9).

Cronbach's alpha coefficient was employed to measure the reliability of the data for this research. It is also important to note that a secondary acceptable lower limit reliability coefficient of 0.57 was set by Cortina (1993:98) (as cited by Field, 2007:674-675). In this research, Factors 1 to 6 all showed excellent higher reliability coefficients of 0.84 and higher, which were in excess of the required 0.70. Even though Factor 7 indicated a reliability coefficient of 0.648, it exceeded Cortina's secondary acceptable lower limit of 0.57 (Cortina, 1993:102).

5 RESEARCH METHODOLOGY

The study consists of quantitative research after a literature study was performed where specific employee engagement drivers (and their respective measuring criteria) were identified. Based on this research, a questionnaire was constructed, data were collected and the data were subjected to exploratory factor analysis to identify underlying dimensions, or factors, of employee engagement. These factors will be used to develop a conceptual framework to measure employee engagement.

The questionnaire consisted of a five-point Likert scale to capture the views of respondents between February and March 2014. A total of 300 questionnaires were administered independently by the researcher to respondents for completion. A total of 260 questionnaires were completed and 18 questionnaires were incomplete resulting in a non-response of 22 questionnaires. This resulted in a total response rate of 86.6%. The data were captured by the Statistical Consultation services of the North-West University and analysed with the Social Package for Social Sciences Version 18 (SPSS, 2009).

The reliability measure, Cronbach's alpha, was used to test the reliability and internal stability of the questionnaire. The data was subjected to a principal factor analysis using a Varimax, normalised rotation. A Kaiser-Meyer-Olkin (KMO) analysis was used to determine whether the sample employed is suitable for analysis. The Bartlett's test of sphericity was employed to test the data's suitability for factor analysis.

6 RESULTS

6.1 Reduction of the measuring criteria

As successfully applied in studies by Fields and Bisschoff (2013a:46; 2013b:47) and Bisschoff and Moolla (2014:1115), a measuring instrument can be simplified and purified by means of exploratory factor analysis. The exploratory factor analysis (EFA) employed a Varimax rotation because of its ability to maximise variance explained (Field, 2007:642). As discussed above, the decision criteria for analysis were (Bisschoff & Moolla, 2014:1116):

- Factor loadings of 0.40 and higher (Fields & Bisschoff, 2014:48-49);
- A cumulative variance that exceeds 60% (Field, 2007:662);
- A Kaiser-Meyer-Olkin (KMO) measure of samplieadequacy higher than 0.70 (Field, 2007:660);
- Bartlett's test of sphericity needs to be lower than 0.005 (Field, 2007:660 & 648); and
- Reliability as measured by Cronbach's alpha to exceed 0.70 (ideally), with a secondary lower limit of 0.57 (Cortina, 1993:98-99; Field, 2007:675).

The data required four rounds of purification to eliminate all non-loading criteria as well as the criteria that cross-load strongly on more than one factor to improve the validity of the model (Hill & Hughes, 2007:342; Gaskin, 2014) and to simplify the results into an operational model that can be used to measure employee engagement in practice. The results of the purification over the four rounds of exploratory factor analysis appear in Table 1 below.

TABLE 1: PURIFICATION OF THE MEASURING CRITERIA

ROUND	VARIANCE EXPLAINED	KMO	BARTLETT	FACTORS EXTRACTED	CRITERIA ELIMINATED
1	75.60%	0.953	0.000	15	67, 10, 34, 58, 68, 29, 71, 72, 32, 59, 63, 64, 57, 33, 66, 70
2	73.52%	0.954	0.000	11	65, 14, 70
3	71.85%	0.954	0.000	9	2, 31, 28, 60, 15
4	69.74%	0.956	0.000	7	30

From the table above, it is clear that the variance explained decreased as the 25 criteria that had either low factor loadings or strongly cross-loaded on more than one factor (cross-loadings exceeded 0.20 (Gaskin, 2014:6)) were omitted from the measuring instrument. Both the KMO and Bartlett tests remained very favourable with KMO in excess of 0.90 in all four cases, while the Bartlett's test of sphericity also remained below the required 0.005 level. Although the variance explained

decreased from 75% to 69% after deletion of the low- and cross-loading criteria, it remained well above the required 60% and could still be described as a good fit to the data (Field, 2007:672). The value of the purification, however, resides within the number of factors that were reduced from 15 to a much more measurable and manageable total of seven factors. The loss of 6% variance explained was a small price to pay for the redetection in the number of factors and the additional gains in validity (Hill & Hughes, 2007:344). The final results of the KMO and Bartlett's test of purified criteria and resulting factor analysis are shown in Tables 2 and 3, respectively.

TABLE 2: KMO AND BARTLETT'S TESTS

Kaiser-Meyer-Olkin measure of sample adequacy.		.956
Bartlett's test of sphericity	Approx. chi-square	18730.640
	df	2485
	Sig.	.000

TABLE 3: VARIANCE EXPLAINED

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	30.943	43.581	43.581	30.943	43.581	43.581	15.673	22.075	22.075
2	7.044	9.921	53.503	7.044	9.921	53.503	9.818	13.828	35.902
3	3.942	5.553	59.056	3.942	5.553	59.056	7.919	11.154	47.056
4	2.893	4.075	63.130	2.893	4.075	63.130	6.817	9.602	56.658
5	1.899	2.674	65.805	1.899	2.674	65.805	4.449	6.266	62.924
6	1.511	2.128	67.933	1.511	2.128	67.933	2.897	4.080	67.004
7	1.280	1.803	69.735	1.280	1.803	69.735	1.939	2.732	69.735

Extraction method: Principal component analysis

6.2 Extracted factors

A total of seven factors were extracted from the data. These factors explain a cumulative variance of 69.74%. The rotated factor table appears in Table 4.

TABLE 4: FACTOR ANALYSIS

	Component						
	1	2	3	4	5	6	7
emp51	.825						
emp39	.825						
emp50	.808						
emp49	.801						
emp52	.801						
emp54	.796						
emp44	.787						
emp45	.787						
emp43	.775						
emp38	.770						
emp55	.768						
emp37	.766						
emp48	.764						
emp42	.753						
emp41	.753						
emp40	.749						
emp53	.740						
emp46	.711						
emp35	.606						
emp36	.599						
emp47	.584						
emp56	.519						
emp25		.853					
emp20		.846					
emp19		.821					
emp11		.772					
emp26		.757					
emp27		.742					
emp1		.732					
emp5		.726					
emp22		.689					
emp6		.689					
emp16		.661					
emp24		.650					
emp23		.589					
emp86			.771				
emp85			.759				
emp84			.722				
emp83			.703				
emp90			.702				
emp89			.677				
emp87			.665				
emp88			.644				
emp92			.641				
emp91			.622				

	Component						
	1	2	3	4	5	6	7
emp82			.597				
emp93			.574				
emp74				.778			
emp77				.757			
emp75				.749			
emp73				.737			
emp78				.736			
emp76				.716			
emp81				.686			
emp79				.685			
emp80				.529			
emp18					.682		
emp17					.637		
emp12					.633		
emp21					.625		
emp13					.588		
emp9					.588		
emp8					.567		
emp7					.540		
emp62						.748	
emp61						.748	
emp94						.549	
emp60						.536	
emp3							.571
emp4							.558
emp30							.454

Extraction method: Principal component analysis
Rotation method: Varimax with Kaiser normalisation
a. Rotation converged in 8 iterations

Based on the factor loadings and criteria pertaining to each factor or sub-factor, a name or label was identified for each one. The seven factors are:

- **FACTOR 1: EMPLOYEES' PERCEPTIONS OF MANAGEMENT AND LEADERSHIP**

From Table 5, it is evident that Factor 1 explains a variance of 43%. A total of 22 criteria loaded onto the factor. Closer scrutiny of the criteria, however, revealed that this factor actually consists of one large factor or alternatively could consist of sub-factors. Resultantly, the factor was further analysed. Both the KMO and Bartlett's tests pertaining to the further analysis of Factor 1 were satisfactory (see Table 6), and factor analysis was used to determine whether the factor consists of sub-factors.

TABLE 5: FACTOR 1: KMO AND BARTLETT'S TEST

Kaiser-Meyer-Olkin measure of sampling adequacy.		.963
Bartlett's test of sphericity	Approx. chi-square	5839.747
	Df	190
	Sig.	.000

The results indicated that two clear sub-factors could be individualised. These two sub-factors both explain high variances with sub-factor 1 explaining 39.34% and sub-factor 2 explaining 35.17% of the total variance (74.51%), respectively (see Table 6).

TABLE 6: FACTOR 1: TOTAL VARIANCE EXPLAINED

	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
Component	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	13.837	69.184	69.184	13.837	69.184	69.184	7.868	39.340	39.340
2	1.066	5.329	74.513	1.066	5.329	74.513	7.035	35.173	74.513

Extraction method: Principal component analysis

The rotated factor table appears in Table 7, signifying the criteria loading onto each sub-factor.

Table 7 follows on next page

TABLE 7: FACTOR 1: ROTATED COMPONENT MATRIX[A]

	Component	
	1	2
emp51	.833	
emp54	.830	
emp52	.819	
emp53	.819	
emp55	.774	
emp49	.749	
emp50	.734	
emp48	.684	
emp46	.680	
emp47	.552	
emp41		.833
emp40		.825
emp43		.806
emp38		.761
emp42		.693
emp39		.678
emp44		.670
emp36		.635
emp45		.612
emp37		.607

Extraction method: Principal component analysis
Rotation method: Varimax with Kaiser normalisation
a. Rotation converged in 3 iterations

These two sub-factors pertaining to Factor 1 are labelled and discussed below.

- **Sub-factor 1: Employees' perceptions of management**

  Sub-factor 1 is the most important sub-factor, and also the most important factor. Its proportional variance explained 39.3 of 43 (16.9%) and even exceeds the variance of Factor 2 (13.8%). Ten criteria loaded onto the sub-factor, all dealing with management issues as perceived by the employees. As a result, the factor is labelled as employees' perceptions of management. Sub-factor 1 explains a variance of 39.3% of the total variance of 74.5% of Factor 1.

- **Sub-factor 2: Engaged leadership team**

  Sub-factor 2 explains a proportional variance of 35.2 of 43 (15.1%). The variance explained by the sub-factor exceeds the variance of Factor 2 (13.8%), signifying that both the sub-factors are deemed to be more important than Factor 2. This means that, in practice, managers should deal with both the sub-factors first before addressing the second factor.

A total of ten criteria also loaded onto the sub-factor. These criteria deal with an engaged leadership team and the factor is therefore labelled as such.

- **FACTOR 2: BEHAVIOURAL ENGAGEMENT**

Factor 2 has been identified as *behavioural engagement.* The 13 items loading onto Factor 2 all point to what we refer to as behavioural engagement, which is confirmed by our literature on this topic by Shuck and Reio (2013:162), who established that employees who are behaviourally engaged answer positively to questions such as "*When I work, I really push myself beyond what is expected of me*" and "*I work harder than is expected to help my organisation be successful*". They reason that behavioural engagement can be understood as increased levels of effort directed toward organisational goals and can be described as the broadening of an employee's available resources displayed overtly. The factor explains a variance of 13.83%.

- **FACTOR 3: CHANGE MANAGEMENT AND STRESS-FREE ENVIRONMENT**

Factor 3 has been identified as *change management and stress-free environment.* A stress-free environment, as identified by Kanaka (2012:65), means that when employees put in their best efforts they can innovate and be creative ensuring optimal output. Most people have found out that when they work in a fun and relaxing atmosphere, they can be more relaxed, which means they can be more successful. The twelve items loading onto Factor 3 highlight the importance and effectiveness of a stress-free environment and change management by employees being encouraged under these circumstances. The factor explains 11.15% of the variance.

- **FACTOR 4: CAREER GROWTH OPPORTUNITIES**

Factor 4 has been identified as *career growth opportunities*. The nine items loading onto Factor 4 indicate the extent of employee satisfaction regarding career growth opportunities in relation to feeling more engaged. This is confirmed in literature by London and Mone (2009) who found that a direct predictor of employee engagement is the extent to which employees are satisfied with their opportunities for career progression and promotion suggesting that employees will feel more engaged if managers provide challenging and meaningful work with opportunities for career advancement . This factor explains a variance of 9.60%.

- **FACTOR 5: EMOTIONAL ENGAGEMENT**

Factor 5 has been identified as *emotional engagement.* The eight items loading onto Factor 5 confirm literature previously discussed, where it was identified that employees who are emotionally

engaged in their work answer affirmatively to questions such as “I feel a strong sense of belonging and identify with my organisation” and “I am proud to work here.” (Shuck & Reio, 2013:159). It is worth noting that the original criterion 21 of the questionnaire, “I believe in the organisation I work for” was initially perceived as being a behavioural element, but data indicates that this criterion relates to Factor 5, ‘emotional engagement’, as ‘believe’ is considered to be an emotion. This factor explains a variance of 6.26%.

- **FACTOR 6: NATURE OF MY JOB**

Factor 6 has been identified as *nature of my job.* The four items loading onto Factor 6 confirm literature indicating that this factor, nature of my job, is, according to Hughes and Rog (2008:749), defined as the extent of employee participation and autonomy. This is supported by research from Custominsight (2013), which indicates that the way to drive engagement to the highest levels is by empowering employees and by making sure that all employees are held accountable for achieving results.

Interestingly, question 94 ‘Employees are ready to deal with changes’, loaded onto this factor, nature of my job. It would seem then from data that change is part of the nature of my job. This factor explains a variance of 4.08.

- **FACTOR 7: FEELING VALUED AND INVOLVED**

Factor 7 has been identified as *feeling valued and involved*. The three items loading onto Factor 7 deal with issues regarding feeling valued and being involved in the company. As a result, this factor was labelled as such: *Feeling valued and involved*. This factor explains the lowest variance of all the factors (2.73%) and is regarded to be the least important one.

6.3 Reliability

Cronbach’s alpha coefficient was employed to measure the reliability of the data. As suggested by Fields and Bisschoff (2013a:61), a reliability coefficient of 0.70 was set. It is also important to note that a secondary acceptable lower limit reliability coefficient of 0.57 was set by Cortina (1993:98) (as cited by Field, 2007:675). The reliability of the seven factors is shown in Table 8.

TABLE 8: RELIABILITY OF THE FACTORS

FACTOR	CRONBACH ALPHA
Factor 1	0.978
Sub-factor 1a	0.965
Sub-factor 1b	0.959
Factor 2	0.934
Factor 3	0.953
Factor 4	0.927
Factor 5	0.958
Factor 6	0.840
Factor 7	0.648
Mean reliability	**0.907**

All the factors and sub-factors have satisfactory reliability coefficients in excess of the required 0.70, except for Factor 7, which has a reliability coefficient of 0.648 (thereby exceeding Cortina's lower limit of 0.57 with ease). In fact, Factors 1 to 6 all show excellent reliability coefficients of 0.84 and higher. In practice, this means that all the factors could be regarded as reliable and internally stable. The measuring criteria pertaining to the factors appear as Appendix A.

6.4 Inter-factor correlations

The inter-factor correlations ($p<0.10$), as calculated by the Pearson correlation coefficient, are shown in Table 9.

TABLE 9: INTER-FACTOR CORRELATION COEFFICIENTS

		FS1	FS2	F2	F3	F4	F5	F6	F7
FS1	Pearson correlation	1	.896**	.426**	.729**	.735**	.595**	.657**	.574**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
	N	292	292	292	292	292	292	292	292
FS2	Pearson correlation	.896**	1	.447**	.695**	.698**	.576**	.630**	.572**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000
	N	292	292	292	292	292	292	292	292
F2	Pearson correlation	.426**	.447**	1	.476**	.390**	.752**	.444**	.612**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000
	N	292	292	292	292	292	292	292	292
F3	Pearson correlation	.729**	.695**	.476**	1	.793**	.590**	.796**	.527**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000
	N	292	292	292	292	292	292	292	292
F4	Pearson correlation	.735**	.698**	.390**	.793**	1	.567**	.657**	.515**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000
	N	292	292	292	292	292	292	292	292
F5	Pearson correlation	.595**	.576**	.752**	.590**	.567**	1	.513**	.652**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000
	N	292	292	292	292	292	292	292	292
F6	Pearson correlation	.657**	.630**	.444**	.796**	.657**	.513**	1	.488**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000
	N	292	292	292	292	292	292	292	292
F7	Pearson correlation	.574**	.572**	.612**	.527**	.515**	.652**	.488**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	292	292	292	292	292	292	292	292

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

From Table 9 it is clear that the majority of the correlations between the factors are high (>0.50). Gaskin (2014) reasons that an inter-factor correlation of 0.5 or higher is important as it indicates that the different factors do address the same concept (in this case 'employee engagement'). As secondary measure, Farrel (2009:5) suggests that factor loading per factor should exceed 0.50, and that no item duel loads with more than 0.20. From Table 3, it is evident that the secondary measure is achieved as the loadings are clearly exceeding 0.5, most actually achieving loadings of above 0.70. This signifies the measures for convergent validity. However, if these correlations exceed 0.70, it indicates that the separate factors could actually be too closely correlated, and consequently they may be measuring the same factor where two sub-factors may exist with such a factor (such as the

case in Factor 1 above where two sub-factors were identified). Inter-factor correlations below 0.70 (but above the 0.50 convergent validity requirement) signify the measures for discriminant validity.

The inter-factor correlations (Table 4.11), supported by the factor loadings that are above 0.50 (Farrel, 2009:5), show strong evidence of convergent validity (Andrews, 2014). Closer inspection also reveals that, except in a limited number of cases (Factors F4 & F1; F2 & F5; and F3 & F6), these correlations are below the required 0.70 correlation coefficient to claim discriminant validity (Gaskin, 2014:7). In practice, this signifies that both convergent and discriminant properties exist within the factor structures, and therefore satisfactory convergent and discriminant validity can be claimed.

7 SIMPLIFIED MODEL TO MEASURE EMPLOYEE ENGAGEMENT

A simplified model to measure employee engagement has been constructed from the analysis. The seven factors and two sub-factors explain a satisfactory 69% of the variance. A total number of 25 criteria were eliminated from the original model. The simplified model appears in Figure 1, while the details on the amended criteria to measure employee engagement are listed in Appendix A.

8 VALIDITY OF THE MODEL

The validity of the model to measure employee engagement was determined by applying the validity measures of external validity (using both population and ecological validity), internal validity, criterion validity (using both concurrent and predictive validity), content validity, construct validity, and criterion related validity (using both construct and discriminant validity). The results are shown in Table 10.

FIGURE 1: A SIMPIFIED MODEL TO MEASURE EMPLOYEE ENGAGEMENT

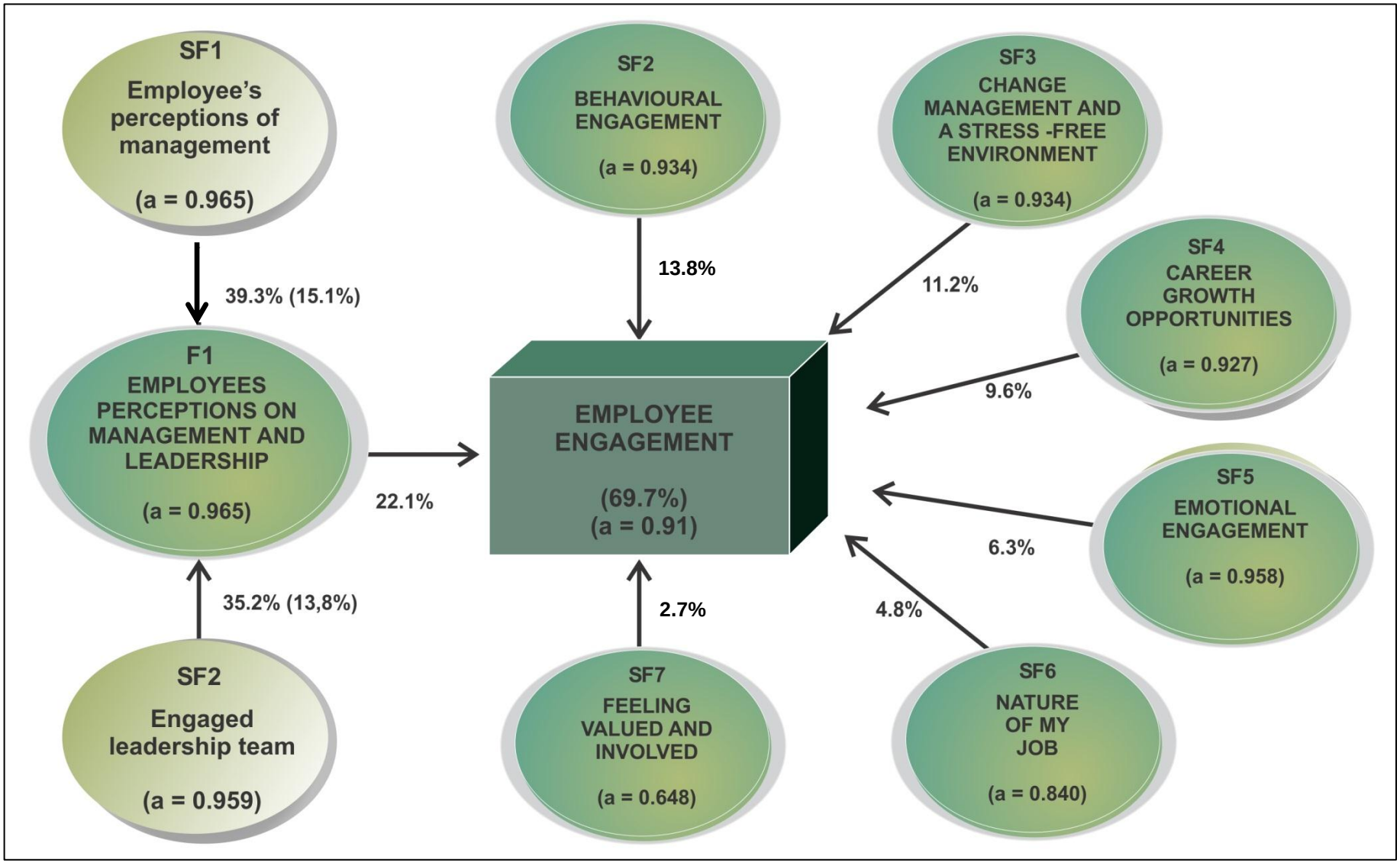

TABLE 10: VALIDITY MEASURES OF THE MODEL TO MEASURE EMPLOYEE ENGAGEMENT

VALIDITY MEASURE	EVIDENCE FOR VALIDITY CLAIMS	VALIDITY ACHIEVED?
EXTERNAL VALIDITY		
Population validity	1. KMO measure of sample adequacy exceeds 0.70 (Shadish *et al*., 2002; Field, 2007:658) 2. Significant factor loadings realised (Farrel, 2007:4)	
Ecological validity	1. Expert opinion and consultation on methods and appropriateness (Shuttleworth, 2013) 2. Pre-testing of questionnaire (CSU, 2014; Gaskin, 2014:3)	
INTERNAL VALIDITY	1. Rigour of study: Supervised and stepwise checked by experts 2. Alternative explanations assessed via consultation with topic specialists and focus group discussion with selected researchers	
CRITERION VALIDITY		
Content validity	Testing against benchmark tests performed only in literature sources (CSU, 2014; CollegeBoard, 2012).	
Predictive validity	Exploratory model did not predict outcomes – to be performed in future research (Shuttleworth, 2013)	
CONTENT VALIDITY	Alignment of criteria to subject area achieved by in-depth theoretical study on previous measurement models in the field of employee engagement (Huitt, 1998; Shuttleworth, 2013).	
CONSTRUCT VALIDITY		
Convergent validity	1. High factor loadings (>0.50) per factor (Gaskin, 2014:5; Farrel, 2007:4) 2. High variance explained (69%) exceeds required 60% (Field, 2007:637) 3. High average reliability (α=0.902) (Gaskin, 2014:7; Knowledgebase, 2014)	
Discriminant validity	1. Elimination of 25 cross-loading criteria (Farrel, 2009:5; Gaskin, 2014:4) 2. Inter-correlations of factors below 0.70 (Mathbits, 2014; Knowledgebase, 2014)	
FACE VALUE VALIDITY	The factors identified by the analysis make good sense and are partially confirmatory of the theory. No unexpected factors surfaced. The results make good sense (Gaskin, 2014:4).	

Key:  = Satisfactory evidence to claim validity;  Evidence not satisfactory. Validity cannot be claimed

9 CONCLUSIONS

From the analysis, the following conclusions can be drawn:

1. This article focused on employee engagement drivers and measures to be used as measuring criteria for employee engagement in the workplace. Based on the literature study, eleven employee engagement drivers were initially identified. Based on research support, only seven drivers consisting of 71 items (relating to these drivers) were identified to be used in the measuring instrument after the operationalisation process.
2. The measuring instrument was then purified by employing various statistical tests. Exploratory factor analysis using Varimax rotation was used due to its ability to maximise variance explained, which was set in excess of 0.70%.
3. The Kaiser-Meyer-Olkin (KMO) measure indicated that the sample was adequate. Values of 0.70 and higher are regarded as acceptable. (This study had a KMO value of 0.956.)
4. The Bartlett's test of sphericity measures whether data are suitable for multivariate statistical analysis, such as factor analysis. The approximate Chi-square for this study was 18730.640, the df was 2485 and the Sig. was 000. This indicated that factor analysis could be used to analyse the data.
5. The measuring criteria required four rounds of purification to eliminate low-loading criteria as well as criteria that cross-load strongly on more than one factor. In total, 23 criteria were eliminated from the measuring instrument.
6. The initial dataset, consisting of 11 drivers and 94 items, was scrutinised, and as a result, was reduced to seven drivers and 71 criteria. These criteria were used to construct the new validated questionnaire employed to measure employee engagement.
7. Seven factors were identified and 71 items. These factors are: *Employee perceptions on management and leadership (which consisted of sub-factors; employees' perceptions of management and engaged leadership team), behavioural engagement, change management and a stress-free environment*, *career growth opportunities, emotional engagement and nature of my job*. These factors were used to create an amended conceptual framework and questionnaire items. These seven factors explained a cumulative variance of 69.74%, which exceeds the required 60% to represent a good fit to the data.
8. The Cronbach alpha coefficient was used to test the reliability of the factors and the overall reliability was very good. Factors 1 to 6 all have excellent reliability coefficients in excess of the required 0.70. Factor 7 has a reliability coefficient of 0.648, which is below the required reliability coefficient of 0.70, but above the lower limit of 0.57 set by Cortina (1993:98-99), and is therefore accepted to be a reliable factor.

9. Validity measures were employed, and the model showed good content and discriminant validity (in support of other validity criteria). Resultantly, it can be concluded that the model to measure employee engagement is a valid model to do so.

10 SUMMARY

This article identified a reliable and valid conceptual framework to measure employee engagement in an organisation. In addition to developing the model to measure engagement, the article also set the determination of the validity of the model as a core objective. The article succeeded in developing the model, and then also succeeded in its higher objective, namely validation. As a result, the research presents a validated model that measures employee engagement in an organisation, rendering a managerial tool for managers to employ as well as a solid base for future academia to depart from in their engagement-related research projects.

REFERENCES

ALOTAIBI, M., OUSCHAN, R. & FERGUSON, G. 2014. Psychological and behavioural customer engagement: An empirical study in online brand communities. Proceedings of the 2nd International Conference on Contemporary Marketing Issues (ICCMI), Athens, Greece. June 18-20. Pp, 211-217.

ANDREWS. 2014. Correlation coefficients. Andrews University. http://www.andrews.edu/~calkins/math/edrm611/edrm05.htm Date of access: 26 Oct. 2014.

BENTLER, P.M. & DE LEEW, J. 2010. Factor Analysis via Components Analysis. Los Angeles, CA: University of California, Los Angeles.

BISSCHOFF, C.A. & MOOLLA, A.I. 2014. A simplified model to measure brand loyalty. Proceedings of the 2nd International Conference on Contemporary Marketing Issues (ICCMI), Athens, Greece. June 18-20. Pp, 1113-1119.

BLESSINGWHITE. 2011. 2011 Employee Engagement Report http://www.blessingwhite.com/EEE__report.asp Date of access: 24 May 2013.

Carmines & Zeller 1991. Validity. Colorado State University. http://writing.colostate.edu/guides/page.cfm?pageid=1388 Date of access 5 September 2014.

COAKES, S.J. & STEED, L.G. 1997. SPSS: Analysis without anguish. Brisbane: Wiley.

COLLEGEBOARD. 2012. Types of validity evidence. http://research.collegeboard.org/services/aces/validity/handbook/evidence Date of access: 10 Oct 2014.

COOK, T.D. & CAMPBELL, D.T. 1979. Quasi-experimentation: Design and analysis issues for field settings. Boston, MA: Houghton Mifflin.

CORTINA, J.M. 1993. What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology, 78*(1):98-104.

COSTELLO, A. & OSBORNE, J. 2005. Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation,* 10:1-9.

CSU. 2014. Colorado State University: Research writing guide. http://writing.colostate.edu/guides/page.cfm?pageid=1388 Date of access: 10 Aug. 2014.

CUSTOMINSIGHT, 2013. 360 degree insight: Employee engagement. custominsight.com. Date of access: 10 Oct. 2014

DU PLESSIS, J.L. 2010. Statistical Consultation Services. Department of Statistics. North-West University. Potchefstroom.

DU PLESSIS, T.E. 2009. South African expatriates as potential entrepreneurs: An exploratory study. Potchefstroom: North-West University. (Thesis – PhD).

FARRELL, A.M. 2010. Factor Analysis and Discriminant Validity: A Brief Review of Some Practical Issues Research Methods Birmingham: University Birmingham, Aston Business School Aston

FIELD, A. 2007. Discovering statistics using SPSS. 2nd ed. London: Sage.

FIELDS, Z. & BISSCHOFF, C.A. 2013a. A model to measure creativity in young adults, *Journal of Social Sciences*, 37(1):55-67.

FIELDS, Z. & BISSCHOFF, C.A. 2013b. A theoretical model to measure creativity at a University, *Journal of Social Sciences*, 34(1):47-59.

FIELDS, Z. & BISSCHOFF, C.A. 2014. Comparative analysis of two conceptual frameworks to measure creativity at a university. *Problems and Perspectives in Management*, 12(3):46-58

FINK, A. 1995**.** How to measure survey reliability and validity. (Version 7). Thousand Oaks, CA: Sage

GASKIN, J.E. 2014. Exploratory factor analysis. http://statwiki.kolobkreations.com/wiki/Exploratory_Factor_Analysis Date of access: 28 Oct 2014.

GALLOP. 2012. Employee engagement and performance. http://www.gallup.com/consulting/52/employee-engagement.aspx Date of access: 10 May 2014.

GOLAFSHANI, N. 2003. Understanding reliability and validity in qualitative research. *The Qualitative Report,* 8(4):597-607.

HILL, C.R. & HUGHES, J.N. 2007. Examination of the Convergent and discriminant validity of the Strengths and Difficulties Questionnaire. *School Psychology Quarterly*, 22(3):380-406, September.

HUITT, W. 1998. Critical thinking: An overview. Educational psychology interactive. Valdosta, GA: Valdosta State University.

KANAKA, M.L.G. 2012. Employee engagement: A corporate boon, 10 ways for effective engagement. *Advances in Management*, 5(2):64-65.

KNOWLEDGEBASE. 2014. Social research. http://www.socialresearchmethods.net/ kb/convdisc.php Date of access: 20 Oct 2014.

LONDON, M. & MONE, E.M. 2009. Strategic performance management: Issues and trends. London: Routledge

MANDALA. 2014. Mandala Consulting: The philosophy of engagement. http://www.mandalkaconsulting.co.za/Products-BeQ.htm Date of access: 10 September 2013.

MATHBITS. 2014. Correlation coefficient: How well does your regression equation truly represent your set of data? http://mathbits.com/MathBits/TISection/ Statistics2/correlation.htm Date of access: 25 Oct 2014.

MEDIASPACE. 2007. Statistical methods. Mediaspace. http://evolutionarymedia.com/cgi-bin/wiki.cgi?StatisticalMethods,template.html Date of access: 21 April 2010.

MONE, E., EISINGER, C., GUGGENHEIM, K., PRICE, B. & STINE, C. 2011. Performance management at the wheel: Driving employee engagement in organisations. *Journal of Business and Psychology,* 26(2):205-212.

NAIDOO, K. 2011. Stress management and its impact on work performance of educators in public schools in KwaZulu-Natal. Potchefstroom: North-West University (Thesis – PhD).

SAINTGIFTS. 2014. Effective tools for employee engagement. http://saintgits.org/main/sim/Activities/Employee%20Engagement%20An%20Effective%20Tool%20For%20Talent%20Retention.asp Date of access: 18 Apr. 2014.

SANTOS, J.R.A. 1999. Cronbach's alpha: A tool for assessing the reliability of scales. *Journal of Extension*, 37(2):1-15.

SCHUNN, C.D. & WALLACH, D. 2012. Evaluating goodness-of-fit in comparison of models to data. http://www.lrdc.pitt.edu/schunn/gof/gof.doc&rct=j&frm=1&q=&esrc=s&sa=U&ei=7jtSVJaSOOLN7Qbg5YCIBQ&ved=0CBIQFjAA&usg=AFQjCNEKrdO-Ai2rr8oUsF5R6SNv1UeBJA Date of access: 30 Oct 2014.

SHADISH, W., COOK, T. & CAMPBELL, D. 2002. Experimental and quasi-experimental designs for generalized causal inference. Boston, MA: Houghton Mifflin

SHUCK, B. & REIO, T. 2013. Employee engagement and wellbeing: A moderation model and implications for practice. *Journal of Leadership and Organizational Studies*, 11(2):156-181.

SHUTTLEWORTH, M. 2013. Predictive validity. https://explorable.com/predictive-validity Date of access: 25 Oct. 2014.

STECKLER, P.H. & MCLEROY, K.R. 2008. The importance of external validity. *American Journal of Public Health*, 98(1): 9-10, January.

WUENSCH, K.L. 2009. Factor analysis – SPSS. FA-SPSS doc. SPSS Help Index. Version17. http://spss.com/software/statistics. Date of access: 6 May 2010.

ZIKMUND, W.G. 2008. Business research methods. 7th ed. London: Thomson Learning.

AMENDED CRITERIA TO MEASURE EMPLOYEE ENGAGEMENT

FACTOR 1: **EMPLOYEES' PERCEPTIONS OF MANAGEMENT AND LEADERSHIP**		
FACTORS	**NUMBER**	**ITEM**
Sub-factor 1: Employees' perceptions of management	46	My organisation's leadership acts with the best interest of employees in mind
	47	Team work is encouraged at my workplace
	48	My leader/manager at work encourages my development
	49	My manager/leader cares about their employees
	50	My manager/leader listens to my opinions
	51	My manager/leader is trustworthy
	52	My manager/leader "walks the talk"
	53	I believe that my senior manager/s have integrity
	54	My manager is someone I can trust
	55	My manager provides me with ongoing feedback that helps me to improve my performance
Sub-factor 2: Engaged leadership team	36	My leadership team is able to build trust with me as an employee
	37	My leader/manager communicates effectively with me
	38	My leader/manager is responsible for building a fulfilling work environment
	39	My leader/manager is flexible in understanding individual needs
	40	My leader/manager is responsible for developing talent
	41	My leader/manager is responsible for coaching team members
	42	My leader/manager reinforces high levels of performance
	43	My leader/manager is responsible for engaging necessary knowledge
	44	My leader/manager continuously monitors engagement issues
	45	My leader/manager identifies appropriate team members for the team

FACTOR 2:BEHAVIOURAL ENGAGEMENT	
NUMBER	**ITEM**
1	The work I do makes a contribution to the organisation
5	I believe that my work matters
6	I believe that my work is meaningful
11	I take pride in my work
16	I derive a sense of self-esteem from the company I work for
19	I really push myself beyond what is expected of me
20	I work harder than is expected of me
22	I have a desire to improve my work
23	I have an understanding of my organisation's business strategy
24	I have the ability to collaborate with my colleagues
25	I am willing to demonstrate extra effort in my work
26	I am driven to continually enhance my skill set
27	I do more than is expected of me

FACTOR 3: **CHANGE MANAGEMENT AND A STRESS-FREE ENVIRONMENT**	
NUMBER	**ITEM**
82	Employees are able to put forth their best efforts
83	Employees can be innovative
84	Employees can be creative
85	Innovation is encouraged in my organisation
86	Employees are encouraged to be innovative
87	Employees are encouraged to face new challenges
88	Employees are encouraged to handle new challenging tasks
89	Employees are encouraged to be flexible

90	Employees are encouraged to adapt to new situations
91	Employees are engaged to their jobs
92	Employees are attached to their jobs
93	Employees understand the need to change

FACTOR 4: **CAREER GROWTH OPPORTUNITIES**	
NUMBER	**ITEM**
73	I have opportunities for career growth at my company
74	I have opportunities for promotion at my company
75	I have a clearly defined career path
76	I am satisfied with my opportunities for career progression
77	I am on a Management Development Programme (MDP) at my company
78	Efforts are made to develop my skills at my company
79	There is someone at work who encourages my development
80	Employees are encouraged to participate in decision-making
81	This last year, I have had opportunities at work to grow

FACTOR 5: **EMOTIONAL ENGAGEMENT**	
NUMBER	**ITEM**
7	I feel a strong sense of belonging to my organisation
8	I can identify with my organisation
9	I am proud to work at my organisation
12	I feel a sense of pride about my company
13	I feel my personality matches the image of the organisation
17	I am proud of my employer
18	I believe that this is the best company to work for
21	I believe in the organisation I work for

FACTOR 6: **NATURE OF MY JOB**	
NUMBER	**ITEM**
60	Employees are trusted with a job
61	Employees accept the responsibilities that come with a job
62	Employees complete their jobs in the stipulated time intervals
94	Employees are ready to deal with changes

FACTOR 7: **FEELING VALUED AND INVOLVED**	
NUMBER	**ITEM**
3	No-one will make fun of me
4	I have the resources to do my job at the level expected of me
30	I am involved in decision-making in my organisation

CHAPTER 4

ARTICLE 3:
CONFIRMATORY ANALYSIS OF THE MODEL TO MEASURE EMPLOYEE ENGAGEMENT

This article was submitted in April 2015 to the journal *Managing Global Transitions* (Proquest IBSS listed). The article is currently under review after it was approved by the editor for review.

CONFIRMATORY ANALYSIS OF THE MODEL TO MEASURE EMPLOYEE ENGAGEMENT

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ABSTRACT

A model to measure the employee engagement was developed by researching historical employee engagement models. These models, consisting of employee engagement constructs and their measuring criteria, have been empirically validated and factorised into seven employee engagement factors. The seven employee engagement factors (of which factor one consists of two sub-factors) were subjected to confirmatory factor analysis to ensure the inclusion of the factors in the validated model to measure employee engagement. The model was also tested for goodness of fit, and the model shows good fit indices with the Comparative Fit Index (0.799), while the good model fit of the secondary fit indices RMSEA (0.078 within a narrow margin of 0.004) and Hoelter (113 at p <= 0.1; 111 at p<= 0.05) also show satisfactory model fit. Management can use the model as diagnostic tool to measure employee engagement and to apply it in managerial decision-making. On the other hand, academics could apply the model to extend their research in employee engagement.

Key terms: model fit, managerial tool, business model, employee engagement construct

JEL Classification: M51

1 INTRODUCTION

Employee engagement, according to Crabb (2011:27) has recently drawn a wealth of managerial attention, especially after research into the management concept indicated that a competitive advantage could be achieved by organisations with engaged employees (Towers Perrin, 2007). However, it seems that this attention results mainly from practitioners, and that scientific research by academia are lacking, especially with regard to measuring and determining what the current level of employee engagement is in an organisation (Saks, 2006 in Kular et al., 2008).

A modern definition of employee engagement, according to Reilly (2014) is that:

> "*Engaged workers stand apart from their not-engaged and actively disengaged counterparts because of the discretionary effort they consistently bring to their roles. These employees willingly go the extra mile, work with passion, and feel a profound connection to their company. They are the people who will drive innovation and move your business forward.*"

The additional productivity of engaged employees is appealing to managers in addition to other benefits such as employees taking less sick leave, lower rate of resignation and stability in the workforce (CIPD Annual Survey Report, 2006). Resultantly, management of organisations realised that if they could have a significant effect on their employees' levels of engagement, they could improve performance of the organisation. To do so, managers required a scientific and reliable method to actually measure employee engagement, and thereby empower themselves to introduce managerial interventions to engage employees.

2 PROBLEM STATEMENT

Developing a model to measure employee engagement required a series of steps, namely to identify employee engagement drivers and their respective measuring criteria, to statistically purify and validate the model, and to actually measure employee engagement. However, despite the fact that the model is statistically validated, the model and its individual factors with their measuring criteria also need

to be confirmed as statistically significant to employ in measuring employee engagement. In addition, the model also needs to be assessed for model fit, and as such indicate the goodness of the model as a measuring tool for employee engagement. This is at present outstanding pertaining the model, and hence, the model cannot be employed in measurement of employee engagement.

3 OBJECTIVES

The primary objective was to confirm the model to be a valid model measure of employee engagement. This objective was achieved by the following secondary objectives:

- Confirm the employee engagement factors and their measuring criteria as factors to measure employee engagement;
- Assess the importance of each of these factors in the measuring of the employee engagement model;
- Determine the significance ($p<=0.05$) of the factors measuring employee engagement;
- Ensure importance and significance ($p<=0.05$) of the measuring criteria pertaining to each of the factors; and to
- Determine the model fit by means of recognised fit indices.

4 CONFIRMATORY FACTOR ANALYSIS

Stapleton (1997), as confirmed by both Williams and Brown (2012) and Brown and Moore (2013), states that two major dichotomies exist regarding factor analysis: *Exploratory* (EFA) and *Confirmatory* factor analysis (CFA). Both EFA and CFA aim to generate the observed relationships between a group of indicators that possess a smaller set of latent variables embedded within the indicators. Although both procedures aim to simplify the data set, essentially EFA and CFA differ in the number and nature of a priori specifications and restrictions made on the latent variable measurement model (Brown & Moore, 2013).

In this regard, Suhr (2006) points out that EFA could be described as a measure that orderly simplifies the interrelated measures. Suhr (2006) states further that traditionally factor analysis is employed to identify underlying (or embedded) structures within the set of interrelated variables. Resultantly, the variables are simplified and a reduced number of factors are extracted, explaining a specific variance. This means that, by performing EFA, the number of constructs and the underlying factor structure are identified. Resultantly, EFA is frequently employed to purify or simplify the set of measures into specific constructs or factors, in the process also eliminating non-relevant measures (Stapleton, 1997).

CFA, on the other hand, requires a strong empirical or conceptual foundation to guide the specification and evaluation of the factor model. In CFA, the researcher specifies the number of factors and the pattern of indicator-factor loadings in advance as well as other parameters such as those bearing on the independence or covariance of the factors and indicator unique variances (Brown & Moore, 2012). CFA allows the testing of the hypothesis that relationships between observed variables and their underlying latent construct(s) exist. This result in the confirmation of the proposed theory or model composed from the literature study and/or the empirical study, and hypothesizes that relationships do exist. These relationships are statistically confirmed by the CFA, indicating not only relationships but also the importance (using regression weights) and model fit (through a number of indices) by testing the hypothesis statistically (Suhr, 2006). The resultant model specifies which variables are correlated with which factors and which factors are correlated with one another (Stapleton, 1997). This means that the CFA process determines whether the hypothesized structure provides a good fit to the data, and if a relationship exists between the observed variables and the underlying factors. The CFA would also verify that all items are properly aligned with the correct facets within the general construct being measured (Holtzman & Vezzu, 2011). CFA can be used for a variety of purposes. According to Brown and Moore (2013), CFA is most popularly used in the process of model development and to examine the identified underlying dimensions of a test instrument. CFA verifies the number of underlying dimensions of the instrument (factors) and the pattern of item-factor relationships (factor loadings) and assists in the determination of how a test should be scored, rendering

a verdict if the proposed factors are suitable for use (hence confirming the proposed structure) (Rahn, 2015).

A suggested approach to CFA, as outlined by Statistical Solutions (2013), consists of four steps. These steps are discussed below.

Step 1: Defining individual constructs

The first step involves defining individual constructs theoretically. This consists of a pre-test to evaluate the construct items and a confirmatory test of the measurement model, conducted using confirmatory factor analysis. It would, in other words, according to Suhr (2006) review the relevant theory and research literature to support model specification.

Step 2: Developing the overall measurement model theory

The second step involves considering the concept of uni-dimensionality between construct error variance and within construct error variance. Brown and Moore (2013) explain that CFA models contain the parameters of factor loadings, unique variances, and factor variances. They further explain that factor loadings are the regression slopes for predicting the indicators from the factor. Unique variance is variance in the indicator that is not accounted for by the factors and is typically presumed to be measurement error and thus usually referred to as “error variance” and “indicator unreliability” and factor variances express the sample variability or dispersion of the factor. This confirms Stapleton’s research (1997) that states that the different models are determined by “fixing” or “freeing” specific parameters such as the factor coefficients, the factor correlation coefficients, and the variance/covariance of the error of measurement. Brown and Moore (2013) define a third type of parameter called a “constrained parameter” which is unknown. It is important to note that CFA is often confined to the analysis of co-variance structures but can be expanded to include the analysis of mean structures.

Step 3: Designing a study to produce empirical results:

The third step in CFA according to Statistical Solutions (2013) is that the measurement model must be specified. Brown and Moore (2013) concur that

CFA requires a strong empirical or conceptual foundation to guide the specification and evaluation of the factor model. CFA can be employed as a precursor to structural equation models (SEM) that specify structural relationships among the latent variables. Brown and Moore (2013) state that, a noteworthy aspect of the model specification is that each indicator loads on only one factor. This means that while primary loading and factor correlations are freely estimated, no other relationships are specified between the indicators and factors. The actual CFA can be conducted using one of several computer programmes such as Amos, LISREL and MPlus Syntax (Arbuckle, 2012).

Step 4: Assessing the measurement model validity:

The fourth step in CFA is assessing the measurement model validity by comparing the theoretical measurement model with the reality model to see how well the data fits. Brown and Moore (2013) outline three major aspects of the results that should be examined to evaluate the acceptability of the CFA model. They are:

1. Overall goodness of fit;
2. The presence or absence of localised areas of strain in the solution (that are specific points of ill-fit) and;
3. The interpretability, size and statistical significance of the model's parameter estimates (regression weights).

Goodness-of-fit test evaluates the model in terms of the fixed parameters used to specify the model and acceptance or rejection of the model. The completed analysis yields several different statistics for determining how well the competing models fit the data, or explain the co-variation among the variables (Stapleton, 1997). Brown and Moore (2013) refer to a variety of goodness of fit statistics that provide a global descriptive summary to determine the significance of the analysis.

The classic goodness of fit index is χ^2 - Chi Square. The chi-square test according to Suhr (2006), indicates the amount of difference between expected and observed covariance matrices. A chi-square value close to zero indicates little difference between the expected and observed co-variances. In addition,

the probability level must be greater than 0.05 when chi-square is close to zero. Brown and Moore (2013) state that while chi-square is routinely reported in CFA research, other fit indices are usually relied on more heavily in the evaluation of model fit. These include the *Standardised Root Mean Square Residual* (SRMR), *Root Mean Square Error of Approximation* (RMSEA), *Tucker-Lewis Index* (TLI) and the *Comparative Fit Index* (CFI). It is suggested that each of these fit indices be reported and considered because they provide different information about the model fit.

5 THE MODEL TO MEASURE EMPLOYEE ENGAGEMENT

The model to measure employee engagement consists of seven factors, factor one consisting of two sub-factors. These factors are:

- Employee perceptions on management and leadership (which consisted of two sub-factors):
    - Employees' perceptions of management; and
    - Engaged leadership team;
- Behavioural engagement;
- Change management and stress-free environment;
- Career growth opportunities;
- Emotional engagement;
- Nature of my job; and
- Feeling valued and involved.

These factors have been validated statistically and employed to measure employee engagement among managers. The managers deemed all the factors to be important, signifying that Behavioural engagement is the most important factor according to the respondents, while they rate Career growth opportunities to be the lowest factor of importance. The initial model shows good fit at 69.75% of variance explained, while the factors all show significant inter-correlations. However, the goodness of fit needs to be confirmed and statistically calculated to render a final verdict on the model fit and its suitability to employ as managerial tool.

6 RESEARCH METHODOLOGY

The model to measure employee engagement was developed from a sound literature basis where validated employee engagement drivers (and their respective measuring criteria) were identified. From these models, a 5-point Likert scale questionnaire was developed to measure employee engagement. The measuring criteria were statistically validated to ensure that they measure the respective criteria after which the model was simplified using exploratory factor analysis. Dual-loading and low-loading (<0.40) measuring criteria were eliminated and the seven factors were identified (see model development above). Data was collected during the period between February 2014 and March 2014, and from a total of 300 questionnaires some 260 questionnaires were usable. This resulted in an effective response rate of 86.6%. The data was captured by the Statistical Consultation Services of the North-West University and analysed with AMOS (an add-on Structural equation and Confirmatory factor analysis program for the Social Package for Social Sciences Version 22 (SPSS, 2014).

7 RESULTS

7.1 Goodness of model fit

Measuring or determining the goodness of a model fit is performed by a number of model fit indices. In this regard, Model Fit, is defined by Kenny (2014) as the "ability of a model to reproduce the data (that is, usually the variance-covariance matrix)". Kenny also points out that it should also be noted that a good-fitting model is not necessarily a valid model, and *vice versa*.

Fit indices consist of both normed and non-normed fit indexes. Both are used to determine the goodness of fit of a model. However, Moolla and Bisschoff (2013:7-8) point out that: "one disadvantage of typical indices is that they are influenced by the population parameters of the research". To address this deficiency, Bentler and Bonnet (in Moolla, 2010) proposed that two coefficients should be used to address the deficiency of population parameters, namely the *Comparative Fit Index* (CFI) for normed and the non-normed *Fit Index* (FI) to determine the fit of the model. Bentler

(1990:240) continues and points out that the CFI avoids the underestimation of fit often noted in small samples, but it also performs well at all sample sizes. However, Zen (2007) renders a verdict on the debate of baseline fit indices by indicating that the CFI is a suitable index to employ as routine fit measure.

In the interpretation of the CFI, a value above 0.9 is regarded to be a very good fit (Konovsky & Pugh, 1994:662). Regarding exploratory research Moolla and Bisschoff (2013:9), however, point out that a CFI index of 0.80 is satisfactory, and that even a CFI of 0.75 could indicate a fair fitting model.

TABLE 1: COMPARATIVE FIT INDEX (CFI)

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.719	.701	.800	.785	**.799**
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

The model to measure employee engagement returned a *Comparative Fit Index* (CFI) of 0.799 (See Table 1). This index signifies a fair fit as it is marginally below the 0.80 as index value.

The *Root Mean Square Error of Approximation* (RMSEA) is a popular and widely applied model fit index (Zen, 2007). Ideally, the RMSEA should be lower than 0.05 and models with a RMSEA of 0.10 or more have poor fit (Dixon & Dixon, 2010:117). The results pertaining to RMSEA is depicted in Table 2.

TABLE 2: ROOT MEAN SQUARE ERROR OF APPROXIMATION

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	**.078**	**.076**	**.080**	**.000**
Independence model	.169	.167	.171	.000

The model shows a moderate fit with RMSEA between 0.05 and 0.1. It has a lower confidence limit of 0.076 and a higher limit of 0.080. These limits indicate a very

narrow confidence interval (0.004). Together with the RMSEA value and narrow confidence interval, the model can be considered a good fit of the model to the population (Moolla & Bisschoff, 2013:5; Browne & Cudeck, 1997:232-243). Regarding the *p of Close Fit* (PCLOSE) test, where the *p*-value examines the alternative hypothesis when the RMSEA is greater than 0.05, the model returns a p-value of 0.00. A *p-value* that is greater than 0.05 signifies that the fit of the model is a close fit (Garson, 2010, in support of Newsom, 2005), however, with regard to the *p-value*, the employee engagement model's *p-value* does not confirm the RMSEA fit indices. However, Zen (2007) observes that a RMSEA equal or less than 0.80 represents an "adequate model fit". Hence, for this model, with a RMSEA of 0.78, it is concluded that an adequate model fit exist.

The goodness-of-fit for the model according to the *Hoelter Index* is used to judge the critical sample size (N); therefore, if the sample size is adequate. A *Hoelter's* N under 75 is considered unacceptably low to accept a model by chi-square (Newsom, 2005).

TABLE 3: HOELTER'S INDEX (N)

Model	HOELTER .05	HOELTER .01
Default model	111	113
Independence model	33	34

The *Hoelter* N returns two values at the following levels of significance: 0.05 and 0.01 (Moolla & Bisschoff, 2013:6). The model to measure employee engagement returns an acceptable value of 113 at the 0.01 and 111 at the 0.05 levels of significance respectively. Hoelter's Index signifies a very good model fit.

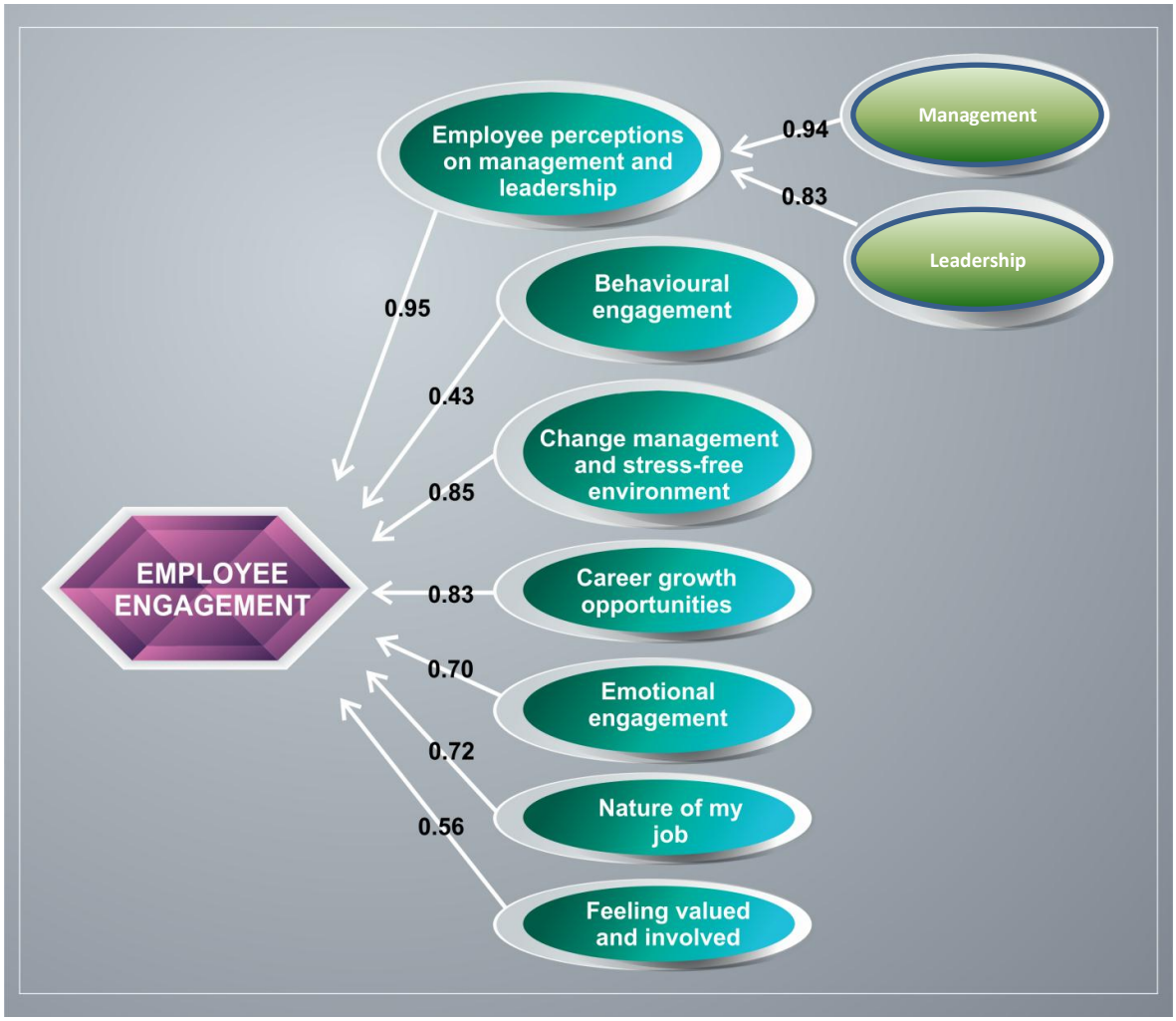
In summary, the model fit is satisfactory. Although the CFI as primary fit index is marginally below 0.80, a CFI of 0.90 or higher would have provided a better fit, but in defence of the model, it is an exploratory model and the fit is not expected to be in that category of fit, nor is it deemed imperative because the model is exploratory in nature and not a final and operationalised model (Moolla & Bisschoff, 2013:3).

Furthermore, considering RMSEA signifying an adequate model fit (Zen, 2007) (or fair model fit according to Browne and Cudeck, 1997:232-243), and Hoelter's Index which signifies a good model fit, the model to measure employee engagement is regarded to be a satisfactory model.

7.2 Importance of the constructs

The importance of the constructs measuring employee engagement is determined by the regression weights of the constructs (Arbuckle, 2012). The summarised model and its regression weights per factor and sub-factors appear in Figure 1. (Appendix A contains the detailed regression weights of all the measuring criteria pertaining to the employee engagement factors and their measuring criteria).

FIGURE 1: MODEL TO MEASURE EMPLOYEE ENGAGEMENT



Significance: p <= 0.05

From the figure it is clear that the factor *Employee perceptions on management and leadership* is regarded to the most important contributing construct (0.95) in the model with a regression weight of 0.95 (strongly supported by the two sub-constructs *Employee's perceptions of management* (0.94) and *Engaged leadership team* (0.83). This is followed by *Change management and stress-free environment* (0.85), *Career growth opportunities* (0.83), *Nature of my job* (0.72), *Emotional engagement* (0.70), *Feeling valued and involved* (0.56) and then *Behavioural engagement* (0.43). Despite the regression weights and their indicative power of importance, it is important to note that all seven the constructs are significant and as such valued constructs in measuring the employee engagement of managers.

8 CONCLUSIONS

From the results it can be concluded that:

- All seven the factors are important in their contribution (according to the regression weights) to the model to measure employee engagement;
- The measuring criteria pertaining to the factors are both important (regression weights) and significant (p<=0.05) with regard to their contribution to the respective factors;
- The factors in the model are significant at p<=0.05;
- Management and leadership are playing a major role in employee engagement, and both play important roles in the first factor;
- The model possesses a satisfactory fit (pertaining to exploratory research); and that
- The model is a suitable and applicable model to measure employee engagement.

9 SUMMARY

The model to measure employee engagement was developed from an in-depth literature review that originally identified 12 engagement constructs and their measuring criteria. These constructs and their measuring criteria were empirically validated and the data tested for reliability. The model was developed and empirically evaluated using a variety of statistical techniques, resulting in seven constructs with one construct consisting of two sub-constructs. The constructs were subjected to Confirmatory factor analysis to ensure that they are relevant and also to determine their relative importance to the model. In addition the model fit was determined using the CFI, Hoelter and the RMSEA indices. The model displays a satisfactory fit, signifying that it can be employed as measuring tool by management and researchers to measure employee engagement.

APPENDIX A: STANDARDISED REGRESSION WEIGHTS

			Estimate
EPMandL	<---	EmpEng	.811
FVandI	<---	EmpEng	.848
BE	<---	EmpEng	.628
EE	<---	EmpEng	.818
CGO	<---	EmpEng	.770
NOMJ	<---	EmpEng	.667
CMandSE	<---	EmpEng	.852
ELT	<---	EPMandL	.952
EPM	<---	EPMandL	.949
emp1	<---	BE	.763
emp5	<---	BE	.776
emp6	<---	BE	.792
emp11	<---	BE	.817
emp16	<---	BE	.740
emp19	<---	BE	.791
emp20	<---	BE	.839
emp23	<---	BE	.702
emp24	<---	BE	.711
emp25	<---	BE	.859
emp26	<---	BE	.755
emp27	<---	BE	.726
emp82	<---	CMandSE	.758
emp83	<---	CMandSE	.805
emp84	<---	CMandSE	.798
emp85	<---	CMandSE	.885
emp86	<---	CMandSE	.893
emp87	<---	CMandSE	.865
emp88	<---	CMandSE	.864
emp89	<---	CMandSE	.803
emp90	<---	CMandSE	.848
emp91	<---	CMandSE	.800
emp92	<---	CMandSE	.705
emp93	<---	CMandSE	.711
emp73	<---	CGO	.850
emp74	<---	CGO	.870
emp75	<---	CGO	.783
emp76	<---	CGO	.823
emp77	<---	CGO	.761
emp78	<---	CGO	.818
emp79	<---	CGO	.822
emp80	<---	CGO	.802
emp81	<---	CGO	.849

emp7	<---	EE	.823
emp8	<---	EE	.871
emp9	<---	EE	.916
emp12	<---	EE	.897
emp13	<---	EE	.789
emp17	<---	EE	.854
emp18	<---	EE	.772
emp21	<---	EE	.851
emp60	<---	NOMJ	.762
emp61	<---	NOMJ	.864
emp62	<---	NOMJ	.832
emp94	<---	NOMJ	.639
emp3	<---	FVandI	.445
emp4	<---	FVandI	.673
emp30	<---	FVandI	.713
emp36	<---	ELT	.739
emp37	<---	ELT	.839
emp38	<---	ELT	.840
emp39	<---	ELT	.862
emp40	<---	ELT	.835
emp41	<---	ELT	.834
emp42	<---	ELT	.843
emp43	<---	ELT	.860
emp44	<---	ELT	.862
emp45	<---	ELT	.849
emp46	<---	EPM	.833
emp47	<---	EPM	.703
emp48	<---	EPM	.844
emp49	<---	EPM	.875
emp50	<---	EPM	.871
emp51	<---	EPM	.916
emp52	<---	EPM	.898
emp53	<---	EPM	.844
emp54	<---	EPM	.887
emp55	<---	EPM	.864

REFERENCE LIST

AMOS ***See*** Statistical Package for Social Sciences

Arbuckle, J.L. 2012. Users Guide. IBM® SPSS® Amos™ 21. ftp://public.dhe.ibm.com/software/analytics/spss/documentation/amos/21.0/en/Manuals/IBM_SPSS_Amos_Users_Guide.pdf Date of access: 25 April 2015

Bentler, P.M. 1990. Comparative fit indexes in structural models. *Psychology Bulletin*, 107(4):238-246.

Brown, T.A. & Moore, M.T. 2013. Confirmatory factor analysis. www.researchgate.net. Date of access: 20 April 2015

Browne, M.W. & Cudeck, R. 1997. Alternative ways of assessing model fit. *Social Methods and Research*, 21(2): 230-258.

Crabb, S. 2011. The use of coaching principles to foster employee engagement. *The Coaching Psychologist*, 7(1):27-34

Dixon, J. & Dixon, M. 2010. Confirmatory factor analysis. Amsterdam: Springer.

Garson, G.D. 2010. Structural equation modelling. http://www.psych.cornell.edu/darlington /factor.htm Date of access: 10 September 2010.

Holtsman, S. & Vezzu, S. 2011. Confirmatory factor analysis and structural equation modeling of noncognitive assessments using PROC CALIS. http://www.nesug.org/proceedings/nesug11/sa/sa07.pdf Date of access: 25 April 2015.

Kenny, D. 2014. Measuring model fit. http://davidakenny.net/cm/fit.htm Date of access: 19 January 2015.

Konovsky, M.A. & Pugh, S.D. 1994. Citizen behaviour and social change. *Academy of Management Journal*, 37(3): 656-669.

Kular, S., Gatenby, M., Rees, C., Soane, E. and Truss, K. 2008. Employee Engagement: A Literature Review. http://business.kingston.ac.uk/sites/default/files/6_rp_emplyengag.pdf Date of access: 20 March 2015

Moolla, A.I. 2010. *A Conceptual Framework to Measure Brand Loyalty.* PhD Thesis. North-West University, Potchefstroom.

Moolla, A.I. & Bisschoff, C.A. 2013. An empirical model that measures brand loyalty of fast-moving consumer goods. *Journal of Economics*, 4(1):1-9

Statistical Package for Social Sciences. 2014. Version 22 AMOS add-on included. http://www-01.ibm.com/software/za/analytics/spss/

CIPD ***see*** Chartered Institute of Personnel Development.

Chartered Institute of Personnel Development. 2014. Employee Engagement. http://www.cipd.co.uk/hr-resources/factsheets/employee-engagement.aspx Date of access: 20 March 2015

Newsom, M. 2014. Some clarifications and recommendations on fit indices. https://www.google.co.za/#q=ecvi+CFA+model+fit+interpretation Date of access: 28 April 2015.

Reilly, R. 2014. Five ways to improve employee engagement now. http://www.gallup.com/businessjournal/166667/five-ways-improve-employee-engagement.aspx Date of access: 20 April 2015.

Rahn, M. 2015. Factor analysis: The difference between confirmatory and exploratory factor analysis. http://www.theanalysisfactor.com/confirmatory-and-exploratory-factor-analysis/ Date of access: 10 April 2015.

Statistical Package for Social Sciences. 2014. Version 22 AMOS add-on included. http://www-01.ibm.com/software/za/analytics/spss/

Stapleton, C.D. 1997. Basic concepts and procedures of confirmatory factor analysis. http://ericae.net/ft/tamu/Cfa.htm Date of access: 20 April 2015

Statistical Solutions. 2013. Confirmatory factor analysis. http://www.statisticssolutions.com/academic-solutions/resources/directory-of-statistical-analyses/confirmatory-factor-analysis Date of access: 17 April 2015

Towers Perrin. 2003. Working today: understanding what drives employee engagement. http://www.towersperrin.com/tp/getwebcachedoc /2003/200309/talent_2003.pdf Date of access: 15 August 2014.

Towers Perrin. 2007. Closing the engagement gap: A road map for driving superior business performance. http://www.biworldwide.com/info/ pdf/ Date of Access: 20 March 2015.

Suhr, D.D. 2006. Exploratory or confirmatory factor analysis? http://www2.sas.com/proceedings/sugi31/toc.html. Date of access 17 April 2015

Williams, B., Brown, T. & Onsman, A. 2012. Exploratory factor analysis: A five-step guide for novices. *Australasian Journal of Para-medicine*, 8(3). http://ro.ecu.edu.au/jephc/vol8/iss3/1 Date of access: 21 April 2015.

Zen, C. 2007. Assess whole SEM model chi square and fit index. http://zencaroline.blogspot.com/2007/04/global-model-fit.html Date of access: 21 April 2015.

CHAPTER 5

ARTICLE 4:

MEASURING EMPLOYEE ENGAGEMENT OF SOUTH AFRICAN MANAGERS

This article was submitted in April 2015 to the *Journal of Psychology* (Proquest IBSS listed). The article is currently under review after it was approved by the editor for review.

MEASURING EMPLOYEE ENGAGEMENT OF SOUTH AFRICAN MANAGERS

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Abstract

This article reports the level of employee engagement of managers in South Africa. The model employed to measure employee engagement was validated as measuring tool, hence the selection thereof as measurement tool. The article provides a short rationale of the validation process where after it continues to provide the demographic profile of the respondents and the level of employee engagement as measured by the model. The model employs seven employee measurement criteria namely *Management and leadership, Behavioural engagement, Change management and stress-free environment, Career growth opportunities, Emotional engagement, nature of the job* and *Feeling valued/involved*. Some 260 employee responses were collected by means of a structured questionnaire from the stratified sample of 300. Although all the factors showed high levels of importance towards employee engagement, Behavioural engagement was deemed to be the most important factor. Furthermore, correlational analysis indicated that none of the demographic variables significantly influence the employee engagement factors, suggesting that stratified managerial interventions are not required to improve employee engagement.

Keywords: measuring**,** employee engagement, behavioural engagement, work stress.

1 INTRODUCTION

Kahn (1990) originally described the concept *employee engagement* as a unique and important motivational concept, stating that employee engagement is "*the harnessing of an employee's full self in terms of physical, cognitive and emotional energies to work role performances*" (Shuck, Reio & Rocco, 2011:427). Shuck et al. (2011:428) expanded on Kahn's theory stating that employee engagement may be seen as "*an individual employee's cognitive, emotional and behavioural state directed toward desired organisational outcomes*". More recently, research by Crabb (2011:28) defined employee engagement as:

"…a positive attitude held by the employee towards the organisation and its values. An engaged employee is aware of business context, and works with colleagues to improve performance within the job for the benefit of the organisation. The organisation must work to develop and nurture engagement, which requires a two-way relationship between employer and employee."
Crabb (2011:28)

Resulting from the formalisation of employee engagement as managerial concept, employee engagement has gained momentum as management focus in recent management literature and as focus of human resource management publications (Lewis, Thomas & Bradley, 2012:19). Presently, the modern approach to the concept *Emotional engagement* can be defined as:

"*Emotional connection an employee feels toward his or her employment organization,*
which tends to influence his or her behaviors and level of effort in work related activities. The more engagement an employee has with his or her company, the more effort they put forth."

Business Dictionary (2015)

While exact definitions of employee engagement differs, all include the line of thought that employee engagement is concerned with the employees' emotional commitment to an organisation, taking into account the magnitude of discretionary

effort they are willing to expend on behalf of their employer. Highly engaged employees go above and beyond their core responsibilities as outlined in their job descriptions, innovating and thinking “outside the box” to help move the organisations forward.

2 PROBLEM STATEMENT

The performance or organisations, as indicated above, is positively influenced by an employee engaged workforce. The heightened emotional connection between organisation and employees positively contributes to organisational performance because employees take less sick leave, actively engages in organisational problems, commit to achieving a company’s goals at their own volition, and are willing to contribute their time, talents and abilities to the success of the organisation, extending their discretionary efforts to go above and beyond their management’s acceptable performance standards (Jackson; 2011:18). On the other hand, research by Hewitt Associates (2009) found that low-engagement organisations’ total shareholder returns are up to 44% below average. Business performance is the responsibility of management, and their ability to unlock the human capital, as performance driver in the organisation, is crucial (Smit & Beatie, 2010:267). In this regard Gallup points out that in their research 54% of employees were not engaged, 17% were actively disengaged, and only 29% could be considered as engaging their time and talents. It is thus clear that employee engagement could provide a competitive benefit managers cannot afford to ignore. However, understanding employee engagement as universal concept seems to differ between organisations and managers. Resolution to such managerial uncertainties is embedded in scientific studies aimed at employee engagement. These studies should also indicate the differentiation in management practices between employee engagement and other near-similar management concepts. Crabb (2011:30) supports this differentiation drive and is of the view that recent research into employee engagement was largely informative, and although useful, has focused largely on what management in organisations can do to engage their employees. In this regard Crabb (2011:31) states that employee engagement is dependent on how the level of engagement can be measured to identify the internalised drivers of engagement that

people hold within themselves. However, just there the core of the problem surfaces, namely: How to measure employee engagement scientifically and apply the results to improve engagement as performance driver in the organisation? This article addresses this specific problem of measuring employee engagement amongst managers with a validated model and to apply the results to managerial interventions so that engagement levels can be improved to the benefit of the organisation.

3 RESEARCH OBJECTIVES

The primary objective of this article is to measure the employee engagement of managers in South Africa.

To achieve the primary objective, the following secondary objectives are formulated, namely to:

- Perform a theoretical study to discuss the model employed to measure employee engagement;
- Determine the demographic profile of the respondents;
- Measure the employee engagement of the respondents;
- Determine if significant correlations exist between the demographic variables and employee engagement factors; and
- Draw conclusions and present recommendations on employee engagement of managers in South Africa.

4 A MODEL TO MEASURE EMPLOYEE ENGAGEMENT

4.1 Development of the model

The model to measure employee engagement was developed through a set of eight steps proven to be successful and useful in a number of social science studies (Moolla, 2010; Chummun, 2012; Hamid, 2014). These steps are discussed below.

Step 1: Literature review on employee engagement measurement

The literature review focussed on identifying the relevant drivers to measure employee engagement. Validated models of employee engagement are studied and extensive literature searches were conducted by means of the electronic databases of the North-West University and also the Internet. From this study a list of employee engagement drivers, their measuring criteria and origins are tabulated (Moolla, 2010).

Step 2: Purification of engagement drivers

The table from Step 1 is purified by scrutinising and eliminating duplicate drivers, merging duplicate or similar drivers and also to structure the drivers in order to ascertain that the more important drivers (as determined by their use and frequency in previous employee engagement measuring studies) are included while also eliminating the less important drivers (Moolla, 2010). This process requires literature support to ensure proper purification process (Chummun, 2012). The purified list of drivers, the measuring criteria and the origin thereof is then tabulated.

Step 3: Questionnaire development

The purified table with the drivers and its measuring criteria were converted into a questionnaire. Additional measuring criteria were formulated where insufficient measuring criteria were present, and indicated as such (Hamid, 2014). A Likert scale was added and the questionnaire was professionally proofread and tested in a focus group to ensure easy understanding and clear instructions (Basson, 2014).

Step 4: Validity and data collection

The questionnaire was subjected to experts to ensure face and content validity. The advice by the experts was applied to the questionnaire where-after data was collected. A total of 260 questionnaires were received back. The data was statistically tested to be suitable for multivariate data analysis by means of Bartlett's test of sphericity while the adequacy of the sample was determined using the Kaiser, Meyer and Olkin tests of sample adequacy (Field, 2007:668).

Step 5: Reduction of measuring criteria

The statistically approved data was subjected to exploratory factor analysis to weed out the less important measuring criteria and confirm or reconfigure the employee engagement drivers. As successfully applied in studies by Fields and Bisschoff (2013a:46; 2013b:47) and Bisschoff and Moolla (2014:1113), a measuring instrument can be simplified and purified by means of exploratory factor analysis. A total of seven new factors were identified as drivers of employee engagement. The exploratory factor analysis (EFA) employed a Varimax rotation because of its ability to maximise variance explained (Field, 2007:642). The decision criteria for analysis were (Bisschoff & Moolla, 2014:1116) that factor loadings should exceed 0.40, the cumulative variance exceeds 60% while the sample remains adequate and the sphericity also remains below 0.05 (Fields & Bisschoff, 2014:48-49). The data required four rounds of purification to eliminate all non-loading criteria as well as the criteria that cross-load strongly on more than one factor. This improved the validity of the model (Hill & Hughes, 2007:7; Gaskin, 2014) and simplified the results into an operational model that can be used to measure employee engagement in practice (see also Step 7).

Step 7: Statistical validity

The validity of the model to measure employee engagement was determined by applying the validity measures of external validity (using both population and ecological validity), internal validity, criterion validity (using both concurrent and predictive validity), content validity, and construct validity, and criterion related validity (using both construct and discriminant validity (CSU, 2014; CollegeBoard, 2012). The exploratory model did not predict outcomes at present to prove criterion validity (Shuttleworth, 2013), as this is a future objective. Resultantly, external and internal validity was statistically proven.

Step 8: Reliability

Reliability as measured by Cronbach Alpha to exceed 0.70 (ideally), with a secondary lower limit of 0.57 (Cortina, 1993:1998; Field, 2007:675).

Step 9: Refined model presentation

The presentation of the final model after the elimination of unreliable and invalid elements within is applied to measure employee engagement (Fields, 2013:149). The model measure employee engagement appears in Figure 1 below.

4.2 Factors measuring employee engagement

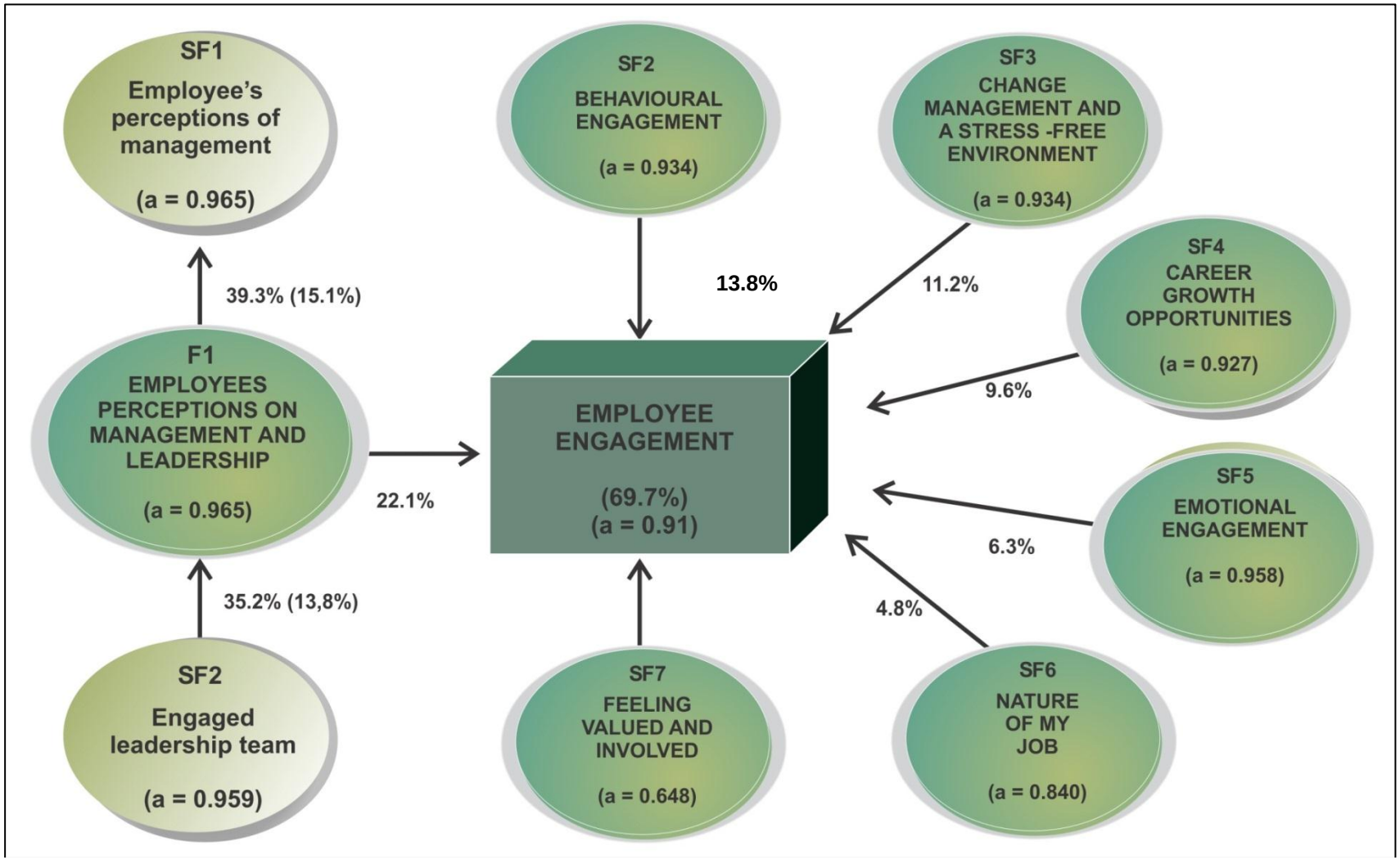
4.2.1 Factor 1: Employees perceptions on management and leadership

Factor 1 consists of two sub-factors, namely *Employee's perceptions of management* and *Engaged leadership team.* Resultantly, these two sub-factors are discussed below.

4.2.1.1 Sub-factor 1: Employee's perceptions of management

Managers and leaders in an organisation are entrusted with employees whom they must work with and through to realize organisational objectives. In organisations, perceptions of leaders, managers and employees shape the climate and effectiveness of the working environment. Perception is the way we all interpret our experiences. Having the right perception is a significant skill for any effective leadership. It is important to understand that perception is often portrayed through communication in any organisation be it big or small and therefore, it is a pertinent tool in leadership (Otara, 2011:21).

Figure 1: A model to measure employee engagement



Lee (2012) states that to improve employee engagement, boost employee morale and maximize employee productivity, management cannot simply just “do the right things” (being efficient). More advanced managerial interventions are needed, and as such management needs also to identify and eliminate the “wrong things” (Inefficiencies) such as organisational and managerial practices that squelch employee engagement and crush employee morale. Lee (2012) claims that it is important to note that the human brain is hard-wired to notice and remember negative issues more effectively than positive issues. In this regard this is supported by Tugend (2012), who claims that some people do have a more positive outlook, but almost everyone remembers negative things more strongly and in more detail. It is thus imperative to identify these negative and engagement-damaging issues in order to improve employee engagement.

This mental processing also refers to the perceptions employees have of their managers. Therefore it is imperative to quickly identify and eliminate engagement-damaging and morale-damaging practices before focusing on implementing positive best practices. So when it comes to improving employee engagement and morale, if your employee feels negatively about you as a manager or your organisation as an employer, it is important for managers to find out how they are creating these perceptions and what they can do to eliminate those actions.

4.2.1.2 Sub-factor 2: Engaged leadership team

Biro (2014) claims that leaders set the tone for engagement in the workplace. This claim is in support of research by Gerard and Crim (2006) who state that to engage employees’, an organisation must capture their hearts and minds by sharing and communicating its strategic direction and goals and by rewarding and recognising performance. And this is only possible thorough effective leadership.

Biro (2014) in support of Gerard and Crim (2006) highlights, “Alignment” as one of the essential skills that leaders must have if they are going to succeed in increasing employee

engagement. He describes this “alignment” of engaged employees feeling aligned with their organisation’s purpose, values and vision, where they find their work meaningful to them because their leader helps them see the connection between what they do and the success of the organisation. Clearly then, employee engagement is strongly driven by the immediate manager and his or her ability to meet employees’ emotional requirements (Insyncsurveys, 2009).

The analyses of research conducted by Mendes and Stander (2011) on “The role of leader behaviour in work engagement and retention” showed that a leader’s behaviour is related to employees’ experiences of the work environment. A higher level of development was related to higher role clarity. Therefore, when a leader focuses on the development of the employee, they are more aware of the expectations that are placed upon them. Higher levels of development relate to higher levels of impact; therefore, an empowering leader ensures that employees feel they can influence their work (Nielsen *et al.,* 2008). Furthermore, the research indicated higher levels of authority correlated with higher levels of self-determination, indicating that when a leader delegates authority appropriately, employees will experience autonomy in determining how to fulfil the expectations placed upon them. Based on the results of the research, it thus becomes clear that leader empowering behaviour has a strong relationship with role clarity and psychological empowerment.

4.2.2 Factor 2: Behavioural engagement

Warner (2013) notes the term “employee engagement” can have a variety of different meanings depending on how it is used and in what context it is implied. Employee engagement can describe someone’s disposition (Trait Engagement), current feelings (State Engagement), or how they perform their job (Behavioural Engagement). Trait and State Engagement lead to observable behaviours that can be described as engaged. It is commonly defined as “putting forth discretionary effort” or “going the extra mile.” Some other examples of behavioural engagement include:

- Extra-role behaviour

- Organisational Citizenship Behaviour (OCB)
- Proactive/Personal Initiative
- Role Expansion
- Engagement with others (team, leaders)

Shuck and Reio (2013:159) reason that behavioural engagement is the most overt form of the employee engagement process. It is often what we can see someone do. Understood as the physical manifestation of the cognitive and emotional engagement combination, behavioural engagement can be understood as increased levels of effort directed toward organisational goals. Resultantly, behavioural engagement can be described as the broadening of an employee's available resources displayed overtly.

4.2.3 Factor 3: Change management and stress-free environment

Employee engagement refers to a situation where all the employees are engaged in their own work and take keen interest in the organisation's activities. Research by MMG (2013) shows that an employee who keeps him/herself busy with his/her work, tends to stay away from nasty office politics such as backstabbing gossiping and undermining co-workers; a major source of stress at the office. All workers favour a stress-free environment at the workplace and tend to leave the employment only when there are constant disputes. An engaged employee does not participate in unproductive tasks but instead finishes assignments on time and benefits the organisation (MMG, 2013). Individuals at work, who are able to trust one another, having good working relationships and feeling more comfortable at work, experience less stress at work (Sixsigmaonline, 2014). Healthy relationships require trust as the central and important aspect in the relationships with co-workers and management.

The work environment often requires change and uncertainty. Change and uncertainty are major stressors to employees. Change not only influences trust between the employees, but could also result in mistrust of management, leading to more stress. Although the

source of stress is change, yet change is unavoidable, managers and leaders should effectively manage change according to change management principles to ensure that employees stay engaged and achieve new heights of engagement and productivity in the workplace (Marko, 2015).

However, due to the nature of the work environment, stress is part and parcel thereof, and resultantly, the challenge for managers and leaders is clear but not easy to facilitate. Management should, therefore, continue to manage towards increased employee engagement.

4.2.4 Factor 4: Career growth opportunities

A seemingly solid strategy for increasing employee engagement involves providing employees with opportunities and resources for career development and mobility within the organisation. Getting employees engaged involves satisfying their needs to learn, advance, and make progress for themselves. Broadening the scope of an employee's duties and providing more complex, meaningful tasks are important for keeping employees engaged in their work and committed to the organisation. Meaningful work inspires engagement and enthusiasm in employees, motivating them to take ownership of new challenges and broaden their experience and skill-sets (Insala, 2015). This ultimately gives employees a sense of progress and the experience required to fill more advanced positions in the organisation. Additionally, providing employees with meaningful work, opportunities to develop skills and experience, and opportunities to take on new roles and greater responsibilities within the organisation contributes positively towards employee engagement (Insala, 2015).

In this regard, Looi (2012) identifies "*having career advancement opportunities*" as a significant driver of employee engagement. Looi's research (2012) reveals that 66% of employees have a contemporary view of career success, where they define career success as having a job that is challenging and that they are passionate about. This research

indicated that the employees also want a job that makes full use of their skills, giving them opportunities for continuous learning, and enables them to make an impact on the people they serve. In addition, the study further revealed that employees consider the alignment of personal and company goals an important element of career success.

In essence, the literature clearly indicates that when employees consider their employment to be successful, aspects such as continual learning, challenging assignments and opportunities to make a difference (rather than just wanting to be promoted) play an important role. These considerations also contribute positively towards engaging employees and to retaining them as employees.

4.2.5 Factor 5: Emotional engagement

Kruse (2012) states that employee engagement is the emotional commitment the employee has to the organisation and its goals. This emotional commitment means engaged employees actually care about their work and their company. They do not work just for a salary, or just for the next promotion, but work on behalf of the organisation's goals. When employees care and when they are *engaged,* they use discretionary effort in their work.

Chamorrow (2013) supports this view stating that employee engagement levels are three times more strongly related to intrinsic than extrinsic motives. In other words when employees have little interest in external rewards, their intrinsic motivation has a substantial positive effect on their engagement levels. In this regard, the research by CIPD (2014) found positive associations between emotional engagement and well-being and negative associations between emotional engagement and work–family conflict and burnout. This suggests that employees who are emotionally engaged in their work are also likely to be happier and healthier (Lewis, Donaldson-Feilder & Tharani, 2012).

This is in support of research conducted by Insync (2009) who found that when employees are emotionally and psychologically engaged with an organisation, they do perform more effectively and efficiently. This has a flow on effect as employees become even more engaged. People take stronger ownership when they are involved in the organisation's improved performance and future development. They also become more enthusiastic and supportive about what is happening in their work environment.

It can, therefore, be concluded that those who invest emotional energy into their roles enhance performance through the promotion of increased connection among co-workers in pursuit of organisational goals (Ashforth & Humphrey, 1995). Investments of emotional energies also help individuals meet the emotional demands of their roles in a way that results in more complete and authentic performance (Rich, Lepine & Crawford, 2010).

4.2.6 Factor 6: Nature of my job

Whilst some argue that employees are engaged if they have a positive attitude towards work, others such as Purcell et al. (2003) (in Kular, 2008) suggest that employee engagement is only meaningful if there is a more genuine sharing of responsibility between management and employees over issues of substance. The CIPD survey conducted by Truss et al. (2006) suggests that strengthening employee voice (or influence in the decision-making) can make a difference to organisational performance.

Employee voice can be defined as the ability for employees to have an input into decisions that are made in organisations (Lucas, Lupton & Mathieson, 2006). It has been argued that one of the main drivers of employee engagement is for employees to have the opportunity to feed their view upwards (Truss *et al.,* 2006). Their survey concluded that currently many organisations are not very successful in doing this and as a result many employees felt they lacked opportunities to express their views and be involved in decisions. On the other hand, researchers at Towers Perrin (2003) found employers are doing well in giving employees the freedom to make decisions relating to their jobs; 62% of respondents

argued they have an appropriate amount of decision-making authority to do their job well (Kular et al., 2008).

It is thus concluded that being aware of the business context and understanding the line of sight between one's job role and the purpose and objectives of the organisation, is another aspect that is often seen as a central element of employee engagement.

4.2.7 Factor 7: Feeling valued and involved

Lipman (2012) postulates that in the business world an employee's relationship with his or her direct manager is the single most important factor in employee engagement and believes if you dig deeper into employee engagement, there is considerable excellent research that feelings of making continual daily progress are also key. Khan (1990) states that individuals who experience meaningfulness tend to feel worthwhile, useful, and valuable are able to give themselves to their work role and to others. According to Khan's successive research (1992), one important influence of meaningfulness is the congruence between the behaviours expected by an organisation and the behaviours that individual employees value as a part of their own self-images. That is, when employees find that their roles call for behaviours that are congruent with how they like to see themselves (their preferred self-images), they are more likely to find their roles inviting, valuable, and worthwhile and more willing to fully engage themselves (Khan, 1992). When individuals find that their role expectations pull for behaviours that they feel are inappropriate for their preferred self-images, they feel devalued, taken advantage of, and less willing to give themselves to their work roles (Rich et al., 2010:618). In this regard it could be concluded that feeling valued and worthwhile is a major contributor to an employee being engaged.

5 RESEARCH METHODOLOGY

The study consists of quantitative research after a literature study was performed where specific employee engagement drivers (and their respective measuring criteria) were identified. Based on this research, a questionnaire was constructed, data was collected and the data was subjected to Exploratory Factor Analysis (EFA) to identify the factors of employee engagement. These factors were used to develop a conceptual framework to measure employee engagement. This article employs this newly developed conceptual framework to actually measure the level of employee engagement.

The questionnaire captured the data on a 5-point Likert scale during the period between February 2014 and March 2014. A total of 300 questionnaires were administered independently by the researcher to respondents for completion, and 260 questionnaires were completed. A total of 18 questionnaires were incomplete while another 22 respondents opted out and did not complete the questionnaires. This resulted in an effective response rate of 86.6%. The data was captured by the Statistical Consultation Services of the North-West University and analysed with the Social Package for Social Sciences Version 18 (SPSS, 2009). Inferential statistics were employed to determine the demographic profile of the respondents as well as the level of employee engagement in accordance to the conceptual framework.

6 RESULTS

6.1 Demographic profile of respondents

The demographic profile of the respondents is shown in Table 1 below.

Table 1: Demographic profile

Items	Classification	Percentage
Gender	Male	86.5
	Female	13.5
Age	<25	2.8
	25-30	20.3
	31-35	32.7
	36-40	21.0
	>40	23.1
Marital status	Single	32.7
	Married	61.5
	Divorced	3.6
	Widow(er)	2.2
Education	Diploma	13.6
	Degree	46.5
	PG Diploma/ Honours	32.6
	Masters	4.8
	Doctorate	1.1
	Others	1.5
Times felt engaged in job in the last 3 months	100%	15.7
	90-99	30.0
	80-89%	19.3
	70-79%	13.6
	<70%	21.4
Length of time with employer	<5yrs	50.0
	6-10yrs	29.2
	11-20yrs	14.6
	>21yrs	4.4
	Self-employed	1.8

N=300; n=260

The gender dispersion in this study indicates that 238 males (86.5%) made up the majority of the respondents as compared to the 37 female respondents which was indicative of only 13.5% of the respondents, making them the minority of the study. With regard to the age of the respondents it is evident that 92 respondents (32.7 %), were within the 31-35 age group. 65 of the respondents (23.1%) were over the age of 40. Some 59 respondents (21%) were between the ages of 36-40 making the number of respondents between the age of 31 and 40 the majority namely, 151 respondents in total in this range (53.7%). 57 respondents (20.3%) resided between the 25-30 age group. Only 8 respondents (2.8 %) were under the age of 25 making this age group the minority.

Regarding the marital status of the respondents, 171 (61.5%) indicated they are married, making them the largest group among the rest of the respondents who then made up 91 respondents (32.7%) who were single, 10 (3.6%) that have been divorced and 6 (2.2%) that are widowed all at the time of the study.

The academic profile of respondents depicted by the highest level of qualification indicates that 127 respondents (46.5%) were in possession of a Bachelor's degree and 89 respondents (32.6%) had in their possession, a post graduate diploma or an honours degree, indicating a total of 216 respondents (79.1%) who were in possession of a bachelor's degree.

The frequency of employees feeling engaged in their job in the last three months indicate that 84 respondents (30%) felt between 90-99% engaged and 60 respondents (21.4%) felt that they were less than 70% engaged in their job. Only 44 respondents (15.5%) felt as though they were 100% engaged in their job over the last three months. 54 respondents (19.3 %) felt between 80-89% engaged and 38 respondents (13.6%) felt between 70-79% engaged in their job over the last three months.

Regarding the length of service with their current employer 137 respondents (50%) indicated that they have been employed at their current employer for less than 5 years. 80 respondents (29.2%) have been employed with their current employer for between 6-10 years, 40 respondents (14.6%) for between 11-20 years and only 12 respondents (4.4%) have been with their current employer for more than 21 years.

6.2 Measuring the factors of employee engagement

The questionnaire is designed on a 5-point Likert scale to measure the employees' perception of employee engagement. They record their perceptions on the categories 1 = Strongly Agree; 2 = Agree; 3 = Neither agree nor disagree; 4 = Disagree; and 5 = Strongly Disagree.

The mean values from the Likert scale were calculated and the results on influences of employee engagement were summarized and discussed in the tables below. The mean scores are interpreted as follows (Salim, 2012:42):

- **1.5 and lower**
  The factor is very important and does influence employee engagement;
- **Between 1.5 but below 3**
  The factor is important in its influence on employee engagement; and
- **3 and higher**
  The factor is not regarded as important and has limited influence on employee engagement.

6.2.1 Employees Perceptions on Management and Leadership

The mean scores of the Employees Perception on Management and Leadership influences questions set is summarized in the Tables 2 and 3 below and indicates the agreement the respondents have of each item on the employee engagement. Table 2 shows the

managerial influences while Table 3 shows the leadership influences on employee engagement.

Table 2: Mean Scores of Sub-factor 1: Employees Perceptions of Management

Number	Item	Mean
46	My organisation's leadership acts with the best interest of employees in mind	2.799
47	Team work is encouraged at my workplace	2.358
48	My leader/manager at work encourages my development	2.595
49	My manager/leader cares about their employees	2.586
50	My manager/leader listens to my opinions	2.455
51	My manager/leader is trustworthy	2.599
52	My manager/leader "walks the talk"	2.763
53	I believe that my senior manager/s have integrity	2.613
54	My manager is someone I can trust	2.623
55	My manager provides me with on-going feedback that helps me to improve my performance	2.649
Mean: **Employees' perceptions of management**		**2.604**

The mean scores for all ten questions are in the medium importance category (between 1.5 and 3). The mean for Employees Perceptions on Management is 2.604. This means that the employees agree that although management interventions to improve employee engagement are important, these interventions are not regarded to be very important, nor unimportant. Positively viewed, it does show that managers could successfully undertake some interventions to improve and maintain engagement. This is, however, an area that could be improved by managerial interventions.

Table 3: Mean Scores of Sub-factor 2: Engaged Leadership Team

Number	Item	Mean
36	My leadership team is able to build trust with me as an employee	2.278
37	My leader/manager communicates effectively with me	2.474
38	My leader/manager is responsible for building a fulfilling work environment	2.448
39	My leader/manager is flexible in understanding individual needs	2.513
40	My leader/manager is responsible for developing talent	2.620
41	My leader/manager is responsible for coaching team members	2.639
42	My leader/manager reinforces high levels of performance	2.440
43	My leader/manager is responsible for engaging necessary knowledge	2.498
44	My leader/manager continuously monitors engagement issues	2.683
45	My leader/manager identifies appropriate team members for the team	2.677
Mean: Engaged Leadership Team		**2.527**

Similar to managerial interventions, the employees perceive the leadership team mean scores for all of the items to be between 1.5 and 3. The mean score for Engaged Leadership Team is 2.527. This means that the leadership team is regarded as important (but not very important as expected), and does warrant interventions to facilitate engaged employees. The employees perceive the interventions of the leadership team to be, as with management, average in attaining employee engagement. In practice the leadership team should spearhead the employee engagement interventions, and have management follow suit to not only to improve their level of importance in employee engagement, but also to lead by example.

6.2.2 Behavioural Engagement

The mean scores of the Behavioural Engagement influence is summarized in the table below and indicates the importance of the items and the factor on employees' engagement.

Table 4: Mean Scores of Behavioural Engagement

Number	Item	Mean
1	The work I do makes a contribution to the organisation	1.482
5	I believe that my work matters	1.596
6	I believe that my work is meaningful	1.582
11	I take pride in my work	1.605
16	I derive a sense of self-esteem from the company I work for	2.018
19	I really push myself beyond what is expected of me	1.818
20	I work harder than is expected of me	1.759
22	I have a desire to improve my work	1.623
23	I have an understanding of my organisation's business strategy	2.102
24	I have the ability to collaborate with my colleagues	1.904
25	I am willing to demonstrate extra effort in my work	1.695
26	I am driven to continually enhance my skill-set	1.648
27	I do more than is expected of me	1.734
Mean: Behavioural Engagement		**1.736**

Although the scores appear to be significantly lower than the management and leadership team scores (signifying higher importance), twelve of the thirteen questions fall within the important category with the mean scores ranging from between 1.582 and 2.102. One question, however, displayed a mean of 1.482, indicating that the respondents strongly believe that they do make a difference in the workplace. This perception, however, is in

contrast with the score of criterion number 27 which states that the respondents “do more than is expected of them”. The mean for Behavioural Engagement is 1.736, signifying that this factor, although marginally falling into the important category, is regarded as an important driver of employee engagement.

6.2.3 Change Management and Stress-free Environment

The mean scores of the Change management and Stress-free environment are displayed in the table below.

Table 5: Mean Scores of Change Management and Stress-free Environment

Number	Item	Mean
82	Employees are able to put forth their best efforts	2.515
83	Employees can be innovative	2.558
84	Employees can be creative	2.556
85	Innovation is encouraged in my organisation	2.570
86	Employees are encouraged to be innovative	2.601
87	Employees are encouraged to face new challenges	2.475
88	Employees are encouraged to handle new challenging tasks	2.481
89	Employees are encouraged to be flexible	2.688
90	Employees are encouraged to adapt to new situations	2.526
91	Employees are engaged to their jobs	2.562
92	Employees are attached to their jobs	2.560
93	Employees understand the need to change	2.699
Mean: **Change Management and Stress-free Environment**		**2.566**

The mean scores for Change Management and Stress-free environment range between 2.481 and 2.699. This indicates that these items are perceived by the respondents to be important on employee engagement. The mean for Change Management and Stress-free Environment is 2.566, signifying that this factor is scoring high on the important category.

6.2.4 Career Growth Opportunities

The mean scores of Career Growth opportunities is summarized in the table below, indicating the importance of Career Growth opportunities in terms of employees' engagement:

Table 6: Mean Scores of Career Growth Opportunities

Number	Item	Mean
73	I have opportunities for career growth at my company	2.726
74	I have opportunities for promotion at my company	2.851
75	I have a clearly defined career path	2.871
76	I am satisfied with my opportunities for career progression	2.962
77	I am on an Management Development Programme (MDP) at my company	3.045
78	Efforts are made to develop my skills at my company	2.732
79	There is someone at work who encourages my development	2.725
80	Employees are encouraged to participate in decision-making	2.836
81	This last year, I have had opportunities to grow	2.825
Mean: Career Growth Opportunities		**2.841**

Nine of the items score high on the important category (signifying lower importance) while one (item 77), indicates a mean score of 3.045 (regarded to be unimportant). This clearly indicates that the respondents do not regard management training an important issue to obtain employee engagement. The remaining eight items display high mean scores of between 2.725 and 2.962. The mean for Career Growth Opportunities is 2.841. This means that the respondents perceive Career Growth Opportunities to be a marginally important driver of employee engagement, while training is not regarded to be an important item in attaining employee engagement.

6.2.5 Emotional Engagement

Emotional Engagement as factor is clarified in the table below.

Table 7: Mean Scores of Emotional Engagement

Number	Item	Mean
7	I feel a strong sense of belonging to my organisation	2.273
8	I can identify with my organisation	2.173
9	I am proud to work at my organisation	2.155
12	I feel a sense of pride about my company	2.116
13	I feel my personality matches the image of the organisation	2.213
17	I am proud of my employer	2.404
18	I believe that this is the best company to work for	2.694
21	I believe in the organisation I work for	2.229
Mean: Emotional Engagement		**2.282**

All eight items of this factor display a level of medium importance (ranging from between 2.116 to 2.694). The overall mean sore for Emotional Engagement is 2.282. This means that although these items are important, they are not very important to enhance employee engagement.

6.2.6 Nature of my Job

The final factor of employee engagement is the Nature of my Job, as shown in Table 8.

Table 8: Mean Scores of Nature of my Job

Number	Item	Mean
60	Employees are trusted with a job	2.175
61	Employees accept the responsibilities that come with a job	2.199
62	Employees complete their jobs in the stipulated time intervals	2.470
94	Employees are ready to deal with changes	2.853
Mean: Nature of my Job		**2.507**

The mean scores of the factor indicate that all three questions are deemed to be important, falling between the acceptable range of 1.5 and 3.

The mean for Nature of my Job is 2.507. This means that although the factor is not very important, it cannot be ignored in striving towards an engaged employee. The item 94 (scoring 2.853) deals with change readiness. This item dangerously flirts towards the unimportant category, signifying that change at work is regarded to marginally important.

6.2.7 Feeling Valued and Involved

The mean scores of the *Feeling Valued and Involved* factor appear in Table 5.9.

Table 9: Mean Scores of Feeling Valued and Involved

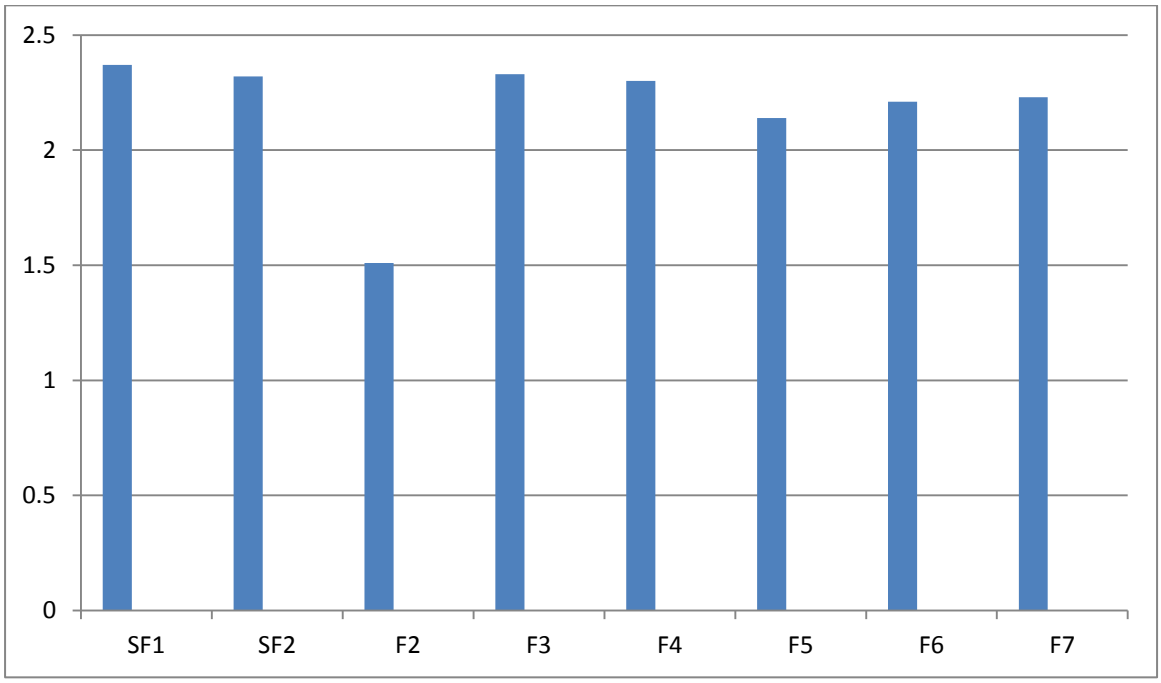
Number	Item	Mean
3	No-one will make fun of me	2.265
4	I have the resources to do my job at the level expected of me	2.288
30	I am involved in decision-making in my organisation	2.560
Mean: Feeling Valued and Involved		**2.371**

The final factor displays three items, all three within the important category. The mean for Feeling Valued and Involved is 2.371, signifying that this factor is regarded by the respondents to be important as a driver of employee engagement.

6.2.8 Importance of factors in employee engagement

The importance of the factors, as perceived by the respondents, in employee engagement is shown in Figure 2. (Note that an inverse scale is used, meaning that the lowest scoring factor is the most important one.)

Figure 2: Importance of factors in employee engagement



From the figure it is evident that Factor 2: Behavioural engagement is regarded to be the most important factor. Except for this factor, all the other factors display importance towards employee engagement. This means that managers and leaders should specifically focus on this factor first in their managerial interventions to improve employee engagement. Referring to figure 1, the fact that factor 2 also explains 13.8% of the variance

supports the focus on Behavioural engagement as the key factor to improve employee engagement. The other factors, including the two sub-factors, should be addressed according to their variance explained because they all fall within the category of being important with marginal differences between the actual mean scores.

6.3 Correlational analysis

In addition to the importance of the factors, correlational analysis was also performed to determine if the demographic variables significantly influence the factors of employee engagement. The results appear in Table 10.

Table 10: Correlations between the demographic variables and the measuring factors

	SF1	SF2	F2	F3	F4	F5	F6	F7
Gender	0.024429	0.030296	0.036558	0.060548	0.044028	0.039063	0.030873	0.081036
Age	-0.017157	0.004574	-0.077438	0.008234	0.008995	-0.129622*	0.065531	-0.132001*
Marital status	-0.074781	-0.008705	0.014153	0.098154	0.088818	-0.026676	0.038868	-0.071709
Language group	0.035598	0.060904	0.036898	0.073887	0.018676	0.017032	0.077282	0.064523
Education	-0.077538	-0.042466	-0.004770	0.042694	0.026728	-0.024408	0.026252	-0.052189
Level of engagement	0.250313*	0.303440*	0.238995*	0.261889*	0.286336*	0.353634*	0.101903	0.343348*
Years with employer	0.044417	0.013259	-0.006560	-0.085210	-0.095346	-0.079734	-0.052800	-0.075766

Correlations Marked correlations are significant at p < .05000 N=242 (Casewise deletion of missing data)

From Table 10 it is evident that a number of significant positive and negative correlations ($p<0.05$) exist. Scrutinising the strength thereof reveals that the two significant negative correlations between the variable “age” and factors 5 and 7 are weak, and practically ignorable. All the factors, except factor 6, show (as expected) positive correlations with the

variable “level of engagement” with coefficients between 0.25 and 0.36. The results, in practice, indicate that the demographic variables do not influence the factors of employee engagement, and as such differentiated interventions to increase employee engagement are unnecessary.

7 SUMMARY

This article focused on the actual measurement of employee engagement amongst managers. The results showed that the typical profile of the respondents in this sample are male, 31-35 years or age (although a fair age dispersion exists), married, have a degree or post-graduate qualifications and being employed less than 10 years. Most were employed less than 5 years.

In addition, the respondents regarded all the employee engagement factors to be important. However, Factor 2 (Behavioural engagement) was regarded to be the most important factor, falling into the category “very important”. Regarding the individual measuring criteria, it is also clear that only one of the criteria were deemed to be unimportant by the respondents (scoring in excess of 3), namely that they are presently engaged in a Management Development Programme.

Regarding the correlation coefficients between demographic profile and the factors, the results showed that demographic variables do not strongly influence the employee engagement factors significantly ($p \leq 0.05$).

REFERENCES

Ayers, K. 2015. A gift of inspiration. Five leadership skills that increase engagement. http://www.agiftofinspiration.com.au/stories/leadership/Five.shtml Date of access: 30 March 2015.

Basson, S. 2014. Measuring the effect of loyalty programmes on a leading pet food brand. Potchefstroom: North-West University. (Dissertation – MBA).

Biro, M. 2014. Employee engagement is a leadership commitment. http://www.forbes.com/sites/meghanbiro/2014/03/30/employee-engagement-is-a-leadership-commitment/ Date of access: 30 March 2015

CAHRS. 2011. Perception is reality: How employees perceive what motivates HR practices Affects their engagement, Behaviour, and Perception. http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1021&context=cahrs_researchlink Date of access: 27 Jan 2015

Chamorrow, T. 2013. Does money really affect motivation? A review of the research. https://hbr.org/2013/04/does-money-really-affect-motiv. Date of access: 12 April 2015

CIPD.2014. Chartered Institute of Personnel Development. Employee Engagement. http://www.cipd.co.uk/hr-resources/factsheets/employee-engagement.aspx Date of access: 20 March 2015

Crawford, E.A., Lepine, J.A. & Rich, B.L. 2010. Job Engagement: Antecedents and effects on job performance. *Academy of Management Journal*, 53 (3): 617-635

Lewis, R., Donaldson-Feilder, E. & Tharani, T. 2012. Managing for sustainable employee engagement: Developing a behavioural framework. http://www.cipd.co.uk/binaries/managing-for-sustainable-employee-engagement-developing-a-behavioural-framework_2012.pdf Date of access: 22 March 2015

Fairhurst, D. 2012. Emotionally engaged employees exhibit higher levels of performance and personal well-being. http://www.hrmagazine.co.uk/hr/opinion/1074808/emotionally-engaged-employees-exhibit-levels-performance-personal-wellbeing Date of access: 22 March 2015.

Fuller, R. 2014. A primer on measuring employee engagement. https://hbr.org/2014/11/a-primer-on-measuring-employee-engagement Date of access: 20 March 2015

Hein, R. 2014. Tips for measuring and Improving Employee Engagement. http://www.cio.com/article/2459447/careers-staffing/tips-for-measuring-and-improving-employee-engagement.html Date of access: 20 March 2015.

Horan, L. 2013. 6 Tips for successfully measuring employee engagement. http://www.businessbee.com/resources/operations/6-tips-for-successfully-measuring-employee-engagement/ Date of access: 11 April 2015.

Insala. 2015. How to engage employees. http://www.insala.com/how-to-engage-employees/ Date of access: 23 March 2015.

Insync surveys. 2009. Emotional Engagement. http://www.insyncsurveys.com.au/media/14429/emotional-engagement-study.pdf Date of access: 22 March 2015.

Kruse, K. 2012. What is employee engagement? http://www.forbes.com/sites/kevinkruse/2012/06/22/employee-engagement-what-and-why/ Date of access: 22 March 2015.

Kular, S., Gatenby, M., Rees, C., Soane, E. and Truss, K. 2008. Employee Engagement: A Literature Review. http://business.kingston.ac.uk/sites/default/files/6_rp_emplyengag.pdf Date of access: 20 March 2015

Lee, D. 2012. 10 Employee engagement destroying perceptions you cannot afford. http://www.tlnt.com/2012/01/13/10-employee-engagement-destroying-perceptions-you-cannot-afford/ Date of access: 20 March 2015.

Lipman, V. 2012. The Joy of Feeling Valued. http://www.forbes.com/sites/victorlipman/2012/08/23/the-joy-of-feeling-valued Date of access: 22 March 2015.

Looi, P.W. 2012. Career Development a Key to Employee Engagement. http://novacrearesearch.com/career-development-key-employee-engagement/Date of access: 22 March 2015

Marko, A. 2015. The Destructive Impact of Stress on Employee Recruitment and Engagement. http://www.managementstudyguide.com/employee-engagement-employee-retention.htm Date of access: 23 March 2015.

MMG.2013. Management Study Guide. Employee Engagement and Employee Retention. http://www.managementstudyguide.com/employee-engagement-employee-retention.htm Date of access: 23 March 2015.

Nielsen, K., Yarker, J., Brenner, S. & Borg, V. 2008. The importance of transformational leadership style for the well-being of employees working with older people. *Journal of Advanced Nursing,* 63(5):465-475.

Otara, A. 2011. Perception: A Guide for Managers and Leaders. *Journal of Management and Strategy*, 2(3):21-24.

Rowlands. 2006. Rowlands International.Survey results on perceptions between managers and employees. http://www.rowlandsonline.com/images/result_survey_ri_01.pdf Date of access: 20 March 2015.

Salim, S.F. 2011. An assessment of brand loyalty of banking clients. Potchefstroom: NWU. (Thesis – MBA).

Sixsigma. 2014. Aveta Business Institute. Employee Engagement in the workplace environment.http://www.sixsigmaonline.org/six-sigma-training-certification-

information/employee-engagement-in-the-workplace-environment.html Date of access: 20 March 2015.

Shuck, B. & Reio, G. 2013. Employee Engagement and well-being: A moderation model and implications for practice. *Journal of Leadership and Organisational Studies,* 21(1):43-58.

Tugend, A. 2012. Praise is fleeting but brickbats we recall. http://www.nytimes.com/2012/03/24/your-money/why-people-remember-negative-events-more-than-positive-ones.html?_r=0 Date of access: 11 April 2015.

Warner, P. 2013. What's the difference between Trait, State and Behavioural employee engagement. https://www.decision-wise.com/whats-the-difference-between-trait-state-and-behavioral-employee-engagement/ Date of access: 22 March 2015.

APPENDIX A:

AMENDED QUESTIONNAIRE: MEASURE EMPLOYEE ENGAGEMENT

FACTOR 1: **EMPLOYEES PERCEPTIONS ON MANAGEMENT AND LEADERSHIP**		
FACTORS	**NUMBER**	**ITEM**
Sub-Factor 1: Employees Perceptions of Management	46	My organisation's leadership acts with the best interest of employees in mind
	47	Team work is encouraged at my workplace
	48	My leader/manager at work encourages my development
	49	My manager/leader cares about their employees
	50	My manager/leader listens to my opinions
	51	My manager/leader is trustworthy
	52	My manager/leader "walks the talk"
	53	I believe that my senior manager/s have integrity
	54	My manager is someone I can trust
	55	My manager provides me with ongoing feedback that helps me to improve my performance
Sub-Factor 2: Engaged Leadership Team	36	My leadership team is able to build trust with me as an employee
	37	My leader/manager communicates effectively with me
	38	My leader/manager is responsible for building a fulfilling work environment
	39	My leader/manager is flexible in understanding individual needs
	40	My leader/manager is responsible for developing talent
	41	My leader/manager is responsible for coaching team members
	42	My leader/manager reinforces high levels of performance
	43	My leader/manager is responsible for engaging necessary knowledge
	44	My leader/manager continuously monitors engagement issues
	45	My leader/manager identifies appropriate team members for the team

FACTOR 2: BEHAVIOURAL ENGAGEMENT	
NUMBER	**ITEM**
1	The work I do makes a contribution to the organisation
5	I believe that my work matters
6	I believe that my work is meaningful
11	I take pride in my work
16	I derive a sense of self-esteem from the company I work for
19	I really push myself beyond what is expected of me
20	I work harder than is expected of me
22	I have a desire to improve my work
23	I have an understanding of my organisation's business strategy
24	I have the ability to collaborate with my colleagues
25	I am willing to demonstrate extra effort in my work
26	I am driven to continually enhance my skill-set
27	I do more than is expected of me

FACTOR 3: **CHANGE MANAGEMENT AND A STRESS-FREE ENVIRONMENT**	
NUMBER	**ITEM**
82	Employees are able to put forth their best efforts
83	Employees can be innovative
84	Employees can be creative
85	Innovation is encouraged in my organisation
86	Employees are encouraged to be innovative
87	Employees are encouraged to face new challenges
88	Employees are encouraged to handle new challenging tasks
89	Employees are encouraged to be flexible
90	Employees are encouraged to adapt to new situations
91	Employees are engaged to their jobs
92	Employees are attached to their jobs
93	Employees understand the need to change

FACTOR 4: **CAREER GROWTH OPPORTUNITIES**	
NUMBER	**ITEM**
73	I have opportunities for career growth at my company
74	I have opportunities for promotion at my company
75	I have a clearly defined career path
76	I am satisfied with my opportunities for career progression
77	I am on an Management Development Programme (MDP) at my company
78	Efforts are made to develop my skills at my company
79	There is someone at work who encourages my development
80	Employees are encouraged to participate in decision-making
81	This last year, I have had opportunities at work to grow

FACTOR 5: **EMOTIONAL ENGAGEMENT**	
NUMBER	**ITEM**
7	I feel a strong sense of belonging to my organisation
8	I can identify with my organisation
9	I am proud to work at my organisation
12	I feel a sense of pride about my company
13	I feel my personality matches the image of the organisation
17	I am proud of my employer
18	I believe that this is the best company to work for
21	I believe in the organisation I work for

FACTOR 6: **NATURE OF MY JOB**	
NUMBER	**ITEM**
60	Employees are trusted with a job
61	Employees accept the responsibilities that come with a job
62	Employees complete their jobs in the stipulated time intervals
94	Employees are ready to deal with changes

FACTOR 7: **FEELING VALUED AND INVOLVED**	
NUMBER	**ITEM**
3	No-one will make fun of me
4	I have the resources to do my job at the level expected of me
30	I am involved in decision-making in my organisation

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

This chapter is the final chapter of the study. This thesis was written in the article format. The chapter summarises the study and presents short summaries of the four articles which resulted from this study.

The chapter draws conclusions from the study, and makes recommendations regarding the findings. The fact that the article format was used allowed for conclusions and recommendations to be offered after each article with reference to how the results may be addressed by management. As a result, the conclusions and recommendations offered in this chapter as generalised to the study, and not repetitive of the conclusions and recommendations presented in the individual articles. The conclusions drawn and the recommendations made are presented pairwise. This means that a recommendation pertaining to a specific conclusion is made to address that conclusion specifically.

The chapter also identifies possible future research avenues that could result from this study, while the challenges faced by the researcher are also highlighted. The chapter ends the study with a final summary.

6.2 OVERVIEW OF THE STUDY

The primary objective of this study was to develop a theoretical model to measure employee engagement. In doing so the employee engagement constructs or drivers required identification. These constructs, as well as its measuring criteria, were identified from the literature. A multitude of factors have been examined during this study in order to

identify and select the employee engagement factors, where after individual in-depth analysis on each of the constructs lead to the identification of the measuring criteria. The resultant theoretical model was next empirically validated employing befitting statistical criteria. This was done to ensure that the model is measuring what it was supposed to measure, thus being a befitting model for measuring managerial employee engagement. The validated model was then employed to actually measure the level of employee engagement of managers. Finally, the study also required that the goodness of fit of the newly developed model was assessed, employing a number of proven model fit indices and confirmatory factor analyses as statistical tools to do so. The overview and contribution made by each of the articles follows.

6.2.1 Article 1

The primary objective of this article, as mentioned above, was to develop a theoretical model to measure employee engagement. Strongly embedded in theoretical research the first contribution of the article is a theoretically founded table signifying the constructs of employee engagement, the measuring criteria, clearly indicating the origin and previous applications in measuring employee engagement. This table is a valuable summary source of employee engagement models, constructs and measuring criteria to future researchers. The empirical study involved exploratory factor analysis of each construct and its measuring criteria. This statistical methodology ensured that the measuring criteria of each construct was validated, meaning that the theoretically developed measuring criteria pertaining to each construct, actually do measure the specific construct. A total of three measuring criteria were deleted. In addition, it also became clear that two of the constructs (*Behavioural engagement* and *Nature of my job*) consisted of two sub-constructs. All the constructs and sub-constructs were also tested for reliability using the Cronbach Alpha coefficient. The additional contribution of the article thus resulted in a construct and measuring criteria validated model to measure employee engagement. Hence a validated measuring tool (questionnaire) to collect data to measure employee engagement resulted as final contribution.

6.2.2 Article 2

The primary objective of article two was to employ the data collected by the validated questionnaire and to determine if any underlying constructs of employee engagement exist. As such, exploratory factor analysis was employed after ensuring that the required sample adequacy existed (measured by the KMO measure of sample adequacy) and that sphericity is low (as measured by Bartlett's test). The data were empirically scrutinised and after four rounds of eliminating dual-loading or low-loading measuring criteria (25 in total), the purified criteria explained a favourable 69% of the variance over seven factors (note that factor one consists of two sub-factors). The seven factors identified are:

- Employee perceptions on management and leadership (which consisted of two sub-factors):
    - Employee's perceptions of management; and
    - Engaged leadership team);
- Behavioural engagement;
- Change management and stress-free environment;
- Career growth opportunities;
- Emotional engagement;
- Nature of my job; and
- Feeling valued and involved.

The validity of the factors and the adapted model were scrutinised, and indicated that the model was indeed valid amongst all the recommended validation criteria except criterion validity. The article contributed by presenting seven factors to measure employee engagement, a purified questionnaire as well as a validated model to measure employee engagement.

6.2.3 Article 3

Article 3 further scrutinised the employee engagement model, subjecting it to Confirmatory factor analysis and measures to determine the actual model fit. The Comparative Fit Index (CFI), RMSEA and Hoelter's tests were employed to do so. The results showed that although the model has a below desired fit (CFI≥0.95), it can be regarded as satisfactory (CFI≥0.79) because the model is an exploratory model, and excellent fit indices are seldom realised with exploratory models. The secondary fit indices supported a satisfactory model fit. The article provides the contributions surrounding model fit and indicated areas of possible improvement within the factors and their contributing criteria.

6.2.4 Article 4

Article 4 continued and used the validated model from Articles 2 and 3 to measure employee engagement. The measurement included a demographic profile of the respondents as well as inferential statistics pertaining to the seven factors identified to measure employee engagement. The results showed that all the factors were important in employee engagement, however *Behavioural engagement* was regarded to be the most important factor, whist the employees did not regard Career growth opportunities as a very important employee engagement factor. In addition to contributing by presenting the results of the measurement of employee engagement, correlational analysis also showed that managers do not need a differentiated strategy with employee engagement strategies because significant correlations between the employee engagement factors and the demographic variables were not found.

6.3 CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations are formulated such that the sets of recommendations follow from each set of conclusion numerically. This means that, for

example, *Recommendation 1* would pertain to *Conclusion 1* per se. Furthermore, the specific conclusions and recommendations were presented at the end of each article, and as such, are not repeated again. The additional and generalised conclusions and recommendations are thus reported. In this regard, the conclusions and recommendations pertaining to the research methodology and statistical analysis used in the study are addressed.

CONCLUSION 1:

The methodology to depart from a sound literature base sets the scene and provides a solid foundation for the development and execution of the rest of the study. The strong literature basis provided an in-depth understanding of the research problem and furthermore it provided a theoretical framework for the empirical study to measure employee engagement in South Africa. It also ensured that a wide array of employee engagement constructs and their context of previous application were identified. As a result the sound theoretical base ensures the required quality and depth as point of departure in this study.

RECOMMENDATION 1:

It is recommended that this methodology to depart from a strong literature base be adopted by future researchers. Not only will this equip them in their respective field of study, but also ensure that they depart in the right direction with their studies. This recommendation extends far beyond the field of employee engagement towards other fields of study as well. This is a sound methodological approach strongly recommended.

CONCLUSION 2:

In addition to Conclusion 1, the sound literature study proved to be invaluable in the construction of the measuring instrument by providing direction not only towards the structure of the resultant questionnaire, but also by identifying the constructs and their various measuring criteria. It can therefore be concluded that the use of theory is also invaluable in constructing a sound and valid questionnaire for empirical research.

RECOMMENDATION 2:

It is highly recommended that the sound theoretical base also plays a central role in the compilation of the measuring instrument, especially where no existing research instruments are readily available for use or where researchers wish to construct specialised or specific questionnaires. The theoretical underpinning strengthens the validity and builds on the success of previous researchers in the field.

CONCLUSION 3:

The statistical analyses employed in this study served the objectives of this study well. The statistical techniques and methodology were identified and exercised by the North-West University's Statistical Consultation Services. More specifically the empirical analyses consisted of:

1. The Kaiser-Meyer-Olkin (KMO) of samplieadequacy proved that variables were strong enough for factor analysis. The favourable KMO values in this study indicated the sample was appropriate as the factor analysis for this sample size was reliable. Therefore the KMO test confirmed sample adequacy and therefore the validity of the results.
2. Bartlett's test of sphericity was deemed suitable for this study with all values below the maximum value of 0.005, as identified for this study. This indicated that the data was indeed suitable for performing multivariate statistical analysis.
3. Cronbach alpha coefficients were calculated for each of the constructs and indicated a high degree of reliability of the data employed in the measuring instrument. This indicates that the results were reliable and appropriate to use in similar future studies.
4. Exploratory Factor Analysis was used to validate the measuring criteria of the employee engagement constructs as well as to simplify and identify the factors within the employee engagement model.
5. Pearson Correlation Coefficients identified the correlation coefficients between the individual factors as well as between the demographic variables of the managers. In

addition to identifying correlations, the coefficients were also employed in determining statistical validity of the model.

6. Confirmatory Factor Analysis was finally suggested as tool to measure the model fit and also to confirm the identified factors of the model.

Based on the empirical analysis of the data in this study it can then be concluded that the:

1. Questionnaire employed was valid;
2. Data analysed was reliable;
3. Newly developed model is valid;
4. Sample was statistically adequate to use for analysis;
5. Data was suitable for multivariate analysis due to satisfactory sphericity coefficients; and that
6. Model fit was satisfactory for an exploratory model.

RECOMMENDATION 3:

In view of the empirical results obtained in this study, from Conclusion 3, it is recommended that:

1. Researchers employ a professional statistician to assist them in the selection of the appropriate statistical techniques;
2. Obtain the assistance of the professional statistician to correctly analyse the data and to provide assistance in the interpretation of the results to ensure absolute correctness thereof;
3. Analyse the data by means of a statistical software package proficient for analysing the data on an advanced level; and
4. The methodology employed in this study could be duplicated in studies of a similar nature (however, heed the three recommendations above).

CONCLUSION 4:

The application of the results of this study are worthy of managerial intervention. It is thus concluded that the study contributes to field of management and that managers should employ the results to improve employee engagement in their respective organisations.

RECOMMENDATION 4:

The final generalised set of recommendations is that the results as well as the model to measure employee engagement are:

1. Employed as a managerial tool to understand employee engagement in South Africa;
2. Employed to practically measure the employee engagement of managers in South African organisations thereby addressing this problematic situation;
3. Applied to positively influence employee engagement as a managerial tool in business success;
4. Used as a solid base for academia to depart from in their future engagement related research.

6.4 AREAS FOR FUTURE RESEARCH

The following areas have been identified for future research:

- An in-depth analysis of any of the seven factors of employee engagement identified in the study could be worthy of further exploration in order to specifically analyse a specific problem area an organisation may have in their employee engagement performance.
- The fact that this study did not show correlations between the employee engagement factors and the demographic variables should not be accepted without further study. Although this group of managers did not show correlations do not imply that this is ultimately the case. A study on the biographical differences and its effect on employee engagement should be further investigated.

- A study of employee engagement with specific international comparative focus where South African organisations are compared to similar organisations in other countries could also be very interesting, especially in the case of global companies that operate within different countries.

6.5 CHALLENGES ENCOUNTERED

As with any study of such magnitude, this study also presented its set of challenges. Normally data collection, data analysis and failure of data to comply with expected outcomes are at the forefront of these challenges. However, this study performed amicably in this department, clearly identifying factors, yielding reliable results, measuring criteria and overall providing good results to interpret and reach the goals of the study. This study presented a new set of challenges.

The biggest challenge was the health of the researcher. Being struck down by severe illness a year delay resulted on the route to recovery. This happened in the middle of the study. This resulted not only in lost studying time, but also in time lost to refocusing and picking up the leads of the study to progress successfully. This extended the productive time frame. As a result another challenge also resulted due to extended study time, namely that of finances and additional costs and registration fees. In this regard the researcher was assisted by the research unit of the North-West University to enable her to complete the final year of PhD studies.

6.6 SUMMARY

The overall contribution of the study resulted through the development of a theoretical model to measure employee engagement with a view to ensure optimal work performance. This was also the primary objective of the study, and as such, the study reached its objectives. The chapter highlighted the four articles by means of a short summary,

showing the logical development from the literature study as point of departure towards the development, validation and also the goodness of fit of the model to measure employee engagement. In addition to the conclusions and recommendations offered in the individual articles this chapter extended by adding generalised conclusions and its fitting recommendations to future researchers and managers. The results from this study are valuable to both researchers and managers in the field of employee engagement.

Researchers may use the results as departure point for their studies, or could adapt the research methodology employed in this study. This methodology yielded desired results, and should also be successful when applied by other researchers seeking the same methodological research objectives. Managers, on the other hand, can employ either the results or the model to measure their organisation's employee engagement levels, taking needed managerial interventions where applicable.

BIBLIOGRAPHY

Alotaibi, M., Ouschan, R. & Ferguson, G. 2014. Psychological and behavioural customer engagement: An empirical study in online brand communities. Proceedings of the 2nd International Conference on Contemporary Marketing Issues (ICCMI), Athens, Greece. June 18-20. Pp. 211-217.

AMOS ***See*** Statistical Package for Social Sciences 2014

Andrews. 2014. Correlation coefficients. Andrews University. http://www.andrews.edu/~calkins/math/edrm611/edrm05.htm Date of access: 26 Oct. 2014.

Arbuckle, J.L. 2012. Users Guide. IBM® SPSS® Amos™ 21. ftp://public.dhe.ibm.com/software/analytics/spss/documentation/amos/21.0/en/Manuals/IBM_SPSS_Amos_Users_Guide.pdf Date of access: 25 April 2015

Aveta Business Institute. 2014. Six Sigma certification. www.sixsigmaonline.org Date of access: 14 June 2014.

Ayers, K. 2015. A gift of inspiration. Five leadership skills that increase engagement. http://www.agiftofinspiration.com.au/stories/leadership/Five.shtml Date of access: 30 March 2015

Basson, S. 2014. Measuring the effect of loyalty programmes on a leading pet food brand. Potchefstroom: North-West University. (Dissertation – MBA).

Bentler, P.M. 1990. Comparative fit indexes in structural models. *Psychology Bulletin*, 107(4):238-246.

Bentler, P.M. & De Leew, J. 2010. Factor Analysis via Components Analysis. Los Angeles, CA: University of California, Los Angeles.

Biro, M. 2014. Employee engagement is a leadership commitment. http://www.forbes.com/sites/meghanbiro/2014/03/30/employee-engagement-is-a-leadership-commitment/ Date of access: 30 March 2015.

Bisschoff, C.A. & Kade, A. 2012. Validation of customer service measuring instrument for ophthalmology industry. Paper delivered at the Annual conference of South African Institute of Management Sciences (SAIMS), Mpekweni, South Africa. September. Published in the conference proceedings.

Bisschoff, C.A. & Moolla, A.I. 2014. A simplified model to measure brand loyalty. Proceedings of the 2nd International Conference on Contemporary Marketing Issues (ICCMI), Athens, Greece. June 18-20. Pp. 1113-1119.

Blessing White. 2011. 2011 Employee engagement report http://www.blessingwhite.com/EEE__report.asp Date of access: 24 May 2013.

Blessing White. 2013. Employee engagement research update. http://blessingwhite.com/research-report/employee-engagement-research-report-update-jan-2013/ Date of access: 21 April

Brown, T.A. & Moore, M.T. 2013. Confirmatory factor analysis. www.researchgate.net. Date of access: 20 April 2015

Browne, M.W. & Cudeck, R. 1997. Alternative ways of assessing model fit. *Social Methods and Research*, 21(2): 230-258.

Brunone, C. 2013. Leadership Development vs. Employee Engagement. http://www.blessingwhite.com/content/articles/enews/June2013.asp?pid=2 Date of access: 10 May 2013.

Business dictionary. 2015. Employee engagement. http://www.businessdictionary.com/definition/employee-engagement.html Date of access: 28 April 2015

Cahrs. 2011. Perception is reality: How employees perceive what motivates HR practices affects their engagement, Behaviour, and Perception. http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1021&context=cahrs_researchlink Date of access: 27 Jan 2015

Carmines & Zeller 1991. Validity. Colorado State University. http://writing.colostate.edu/guides/page.cfm?pageid=1388 Date of access 5 September 2014.

CEB ***See*** Corporate Executive Board

Chamorrow, T. 2013. Does money really affect motivation? A review of the research. https://hbr.org/2013/04/does-money-really-affect-motiv. Date of access: 12 April 2015

Chartered Institute of Personnel Development. 2014. Employee Engagement. http://www.cipd.co.uk/hr-resources/factsheets/employee-engagement.aspx Date of access: 20 March 2015

Chummun, B.Z. 2012. Evaluating business success in the Microinsurance industry of South Africa. (Thesis – PhD) Potchefstroom: North-West University).

CIPD ***see*** Chartered Institute of Personnel Development.

Coakes, S.J. & Steed, L.G. 1997. SPSS: Analysis without anguish. Brisbane: Wiley.

Collegeboard. 2012. Types of validity evidence. http://research.collegeboard.org/services/aces/validity/handbook/evidence Date of access: 10 Oct 2014.

Collins, M. 2014. Recruitment & HR Services Group. www.collinsmnicholas.ie/blog/?p==660. Date of access: 10 May 2013.

Colorado State University. 2014. Research writing guide. http://writing.colostate.edu/guides/page.cfm?pageid=1388 Date of access: 10 Aug. 2014.

Cook, T.D. & Campbell, D.T. 1979. Quasi-experimentation: Design and analysis issues for field settings. Boston, MA: Houghton Mifflin.

Corporate Executive Board. 2004. Research report. http://www.executiveboard.com/ Date of access: 10 April 2014.

Corporate Executive Board. 2006. Research report. http://www.executiveboard.com/ Date of access: 10 April 2014.

Corporate Executive Board. 2010. Research report. http://www.executiveboard.com/ Date of access: 10 April 2014.

Cortina, J.M. 1993. What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology, 78*(1):98-104.

Costello, A. & Osborne, J. 2005. Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation,* 10:1-9.

Costello, A.B. & Osborne, J.W. 2005. Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment Research & Evaluation,* 10(7). http://pareonline.net/pdf/v10n7a.pdf. Date of Access: 13 July 2013.

Covey, S.M.R. 2009. How the Best leaders Build Trust. Chicago: Linkage's Eleventh Annual Best of Organization Development Summit. http://www.leadershipnow.com/CoveyOnTrust.html Date of access: 17 June 2014.

Crabb, S. 2011. The use of coaching principles to foster employee engagement. *The Coaching Psychologist*, 7(1):27-34

Crawford, E.A., Lepine, J.A. and Rich, B.L. 2010. Job Engagement: Antecedents and effects on job performance. *Academy of Management Journal*, 53 (3):617-635

Crim, D. & Seijts, G. 2006. What engages employees the most or, the ten Cs of employee engagement. *Ivey Business Journal*. http://iveybusinessjournal.com/ topics/the-workplace/what-engages-employees-the-most-or-the-ten-cs-of-employee-engagement Date of access: 17 June 2014.

CSU ***see*** Colorado State University

Custominsight. 2013a. 360 degree insight: Employee engagement. Custominsight.com Date of access: 10 Oct. 2014

Custominsight. 2013b. What Drives the Most Engaged Employees? http://www.custominsight.com/employee-engagement-survey/research-employee-engagement.asp Date of access: 14 June 2014.

Custominsight. 2015. What is employee engagement. http://www.custominsight.com/employee-engagement-survey/what-is-employee-engagement.asp Date of access: 10 April 2014.

Dicke, C., Holwerda, J. & Kontakos, A.M. 2007. *Employee Engagement. What do we really know? What do we need to know to take Action*? Paris: CAHRS. http://www.uq.edu.au/vietnampdss/docs/July2011/EmployeeEngagementFinal.pdf Date of access: 17 June 2014.

Dixon, J. & Dixon, M. 2010. Confirmatory factor analysis. Amsterdam: Springer.

Donaldson-Feilder, E, Lewis, R and Tharani, T. 2012. Managing for sustainable employee engagement: Developing a behavioural framework. http://www.cipd.co.uk/binaries/managing-for-sustainable-employee-engagement-developing-a-behavioural-framework_2012.pdf Date of access: 22 March 2015

Du Plessis, J.L. 2010. NWU Statistical Consultation Services. Potchefstroom: North-West University.

Du Plessis, T.E. 2009. South African expatriates as potential entrepreneurs: An exploratory study. Potchefstroom: North-West University. (Thesis – PhD).

Entec Corporation. 2010. Understanding employee disengagement. http://www.employeeonlinesurvey.com/news.php/news/44 Date of access: 25 April 2015.

Fairhurst, D. 2012. Emotionally engaged employees exhibit higher levels of performance and personal well-being. http://www.hrmagazine.co.uk/hr/opinion/1074808/ emotionally-engaged-employees-exhibit-levels-performance-personal-wellbeing Date of access: 22 March 2015.

Farrell, A.M. 2010. Factor Analysis and Discriminant Validity: A Brief Review of Some Practical Issues Research Methods Birmingham: University Birmingham, Aston Business School Aston

Field, A. 2007. *Discovering statistics using SPSS*. 3rd ed. London: Sage.

Fields, Z. 2013. *A conceptual framework to measure creativity at tertiary educational level*. (Thesis - PhD). Potchefstroom: North-West University.

Fields, Z. & Bisschoff, C.A. 2013a. A model to measure creativity in young adults, *Journal of Social Sciences*, 37(1):55-67.

Fields, Z. & Bisschoff, C.A. 2013b. A theoretical model to measure creativity at a University, *Journal of Social Sciences*, 34(1):47-59.

Fields, Z. & Bisschoff, C.A. 2014. Comparative analysis of two conceptual frameworks to measure creativity at a university. *Problems and Perspectives in Management*, 12(3):46-58

Fink, A. 1995. How to measure survey reliability and validity Version 7. Thousand Oaks, CA: Sage

Fuller, R. 2014. A primer on measuring employee engagement. https://hbr.org/2014/11/a-primer-on-measuring-employee-engagement Date of access: 20 March 2015

Gallup. 2011. *Employee Engagement: What's your employee ratio?* Washington: Gallup.

Gallup. 2012. Employee engagement and performance. http://www.gallup.com/consulting/52/employee-engagement.aspx Date of access: 10 May 2014.

Garson, G.D. 2010. Structural equation modelling. http://www.psych.cornell.edu/darlington/factor.htm Date of access: 10 September 2010.

Gaskin, J.E. 2014. Exploratory factor analysis. http://statwiki.kolobkreations.com/wiki/Exploratory_Factor_Analysis Date of access: 28 Oct 2014.

Golafshani, N. 2003. Understanding reliability and validity in qualitative research. *The Qualitative Report,* 8(4):597-607.

Hamid, Z. 2014. Stress management and its impact on the work performance of educators in Swaziland. Potchefstroom: North-West University. (Thesis - PhD).

Harter, J. 2013. *Chief scientist of workplace management and wellbeing*. Washington: Gallup.

Hein, R. 2014. Tips for measuring and Improving Employee Engagement. http://www.cio.com/article/2459447/careers-staffing/tips-for-measuring-and-improving-employee-engagement.html Date of access: 20 March 2015.

Hewitt, A.O.N. 2011. The multiplier effect: Insights into how senior leaders drive employee engagement higher. http://www.aon.com/attachments/thought-leadership/Aon-Hewitt-White-paper_Engagement.pdf

Hill, C.R. & Hughes, J.N. 2007. Examination of the Convergent and discriminant validity of the Strengths and Difficulties Questionnaire. *School Psychology Quarterly*, 22(3):380-406, September.

Holtsman, S. & Vezzu, S. 2011. Confirmatory factor analysis and structural equation modeling of noncognitive assessments using PROC CALIS. http://www.nesug.org/proceedings/nesug11/sa/sa07.pdf Date of access: 25 April 2015

Horan, L. 2013. 6 Tips for successfully measuring employee engagement. http://www.businessbee.com/resources/operations/6-tips-for-successfully-measuring-employee-engagement/ Date of access: 11 April 2015.

Hughes, J.C. & Rog, E. 2008. Talent Management: A strategy for improving employee recruitment, retention and engagement within hospitality organisations, *International Journal of Contemporary Hospitality Management*, 20(7):743-757.

Huitt**,** W. 1998. Critical thinking: An overview. Educational psychology interactive. Valdosta, GA: Valdosta State University.

Insala. 2015. How to engage employees. http://www.insala.com/how-to-engage-employees/ Date of access: 23 March 2015

Insync surveys. 2009. Emotional Engagement. http://www.insyncsurveys.com.au/media/14429/emotional-engagement-study.pdf Date of access: 22 March 2015

Johnson, M. 2011. Workforce Deviance and the Business Case for Employee Engagement, *Journal for Quality & Participation*, 34(2):11-16.

Kahn, W.A. 1990. Psychological conditions of personal engagement and disengagement at work. Academy of Management Journal, 33(4):692-724, December.

Kanaka, M.L.G. 2012. Employee engagement: A corporate boon, 10 ways for effective engagement. *Advances in Management*, 5(2):64-65.

Kanaka, M.L.G. 2012. Employee Engagement: A corporate boon, 10 ways for effective engagement, *Advances in Management*, 5(2): 64-65.

Knowledgebase. 2014. Social research. http://www.socialresearchmethods.net/kb/convdisc.php Date of access: 20 Oct 2014.

Konovsky, M.A. & Pugh, S.D. 1994. Citizen behaviour and social change. *Academy of Management Journal*, 37(3): 656-669.

Konrad, A.M. 2006. Engaging employees through high-involvement work practices. *Ivey Business Journal*. http://iveybusinessjournal.com/topics/the-workplace/engaging-employees-through-high-involvement-work-practices Date of access: 17 June 2014.

Kruse, K. 2012. What is employee engagement? http://www.forbes.com/sites/kevinkruse/2012/06/22/employee-engagement-what-and-why/ Date of access: 22 March 2015

Kular, S., Gatenby, M., Rees, C., Soane, E. & Truss, K. 2008. Employee engagement: A literature review. http://business.kingston.ac.uk/sites/default/files/6_rp_emplyengag.pdf Date of access: 20 March 2015

Lee, D. 2012. 10 Employee engagement destroying perceptions you cannot afford. http://www.tlnt.com/2012/01/13/10-employee-engagement-destroying-perceptions-you-cannot-afford/ Date of access: 20 March 2015.

Lewis, A., Thomas, B. & Bradley, O. 2012. Employee Socialisation: A platform for employee engagement? *International Journal of Employment Studies,* 20(1):25-59.

Lipman, V. 2012. The joy of feeling valued. http://www.forbes.com/sites/victorlipman /2012/08/23/the-joy-of-feeling-valued Date of access: 22 March 2015.

London, M. & Mone, E.M. 2009. Strategic performance management: Issues and trends. London: Routledge

Looi, P.W. 2012. Career Development a Key to Employee Engagement. http://novacrearesearch.com/career-development-key-employee-engagement/Date of access: 22 March 2015.

Lucas, R., Lupton, B. & Mathieson, H. 2006. Human Resource Management in an international context. London, CIPD.

Luthans, F. & Peterson, S.J. 2002. Employee engagement and manager self-efficacy. *Journal of Management Development*, 21(5):376 – 387.

Macleod Review. 2009. Enhancing performance through employee engagement http://www.cipd.co.uk/NR/rdonlyres/39AAAB40-3015-4CE9-8F02-0B3C0AFE8CBF/0/NitaClarkepresentation.pdf Date of access: 10 April 2015.

Mancosa Management Guide. 2013. Employee engagement and employee retention. Available from: http://www.managementstudyguide.com/employee-engagement-employee-retention.htm Date of access: 20 April 2015.

Mandala. 2014. Mandala Consulting: The philosophy of engagement. http://www.mandalkaconsulting.co.za/Products-BeQ.htm Date of access: 10 September 2013.

Marko, A. 2015. The Destructive Impact of Stress on Employee Recruitment and Engagement. http://www.managementstudyguide.com/employee-engagement-employee-retention.htm Date of access: 23 March 2015.

Mathbits. 2014. Correlation coefficient: How well does your regression equation truly represent your set of data? http://mathbits.com/MathBits/TISection/Statistics2/correlation.htm Date of access: 25 Oct 2014.

McBain, R. 2007. The practice of engagement: research into current employee engagement practice. *Strategic HR Review*, 6(6):124-136.

Mediaspace. 2007. Statistical methods. Mediaspace. http://evolutionarymedia.com/cgi-bin/wiki.cgi?StatisticalMethods,template.html Date of access: 21 April 2010.

MMG ***See*** Mancosa Management Guide.

Mone, E., Eisinger, C., Guggenheim, K., Price, B. & Stine, C. 2011. Performance management at the wheel: Driving employee engagement in organisations. *Journal of Business and Psychology,* 26(2):205-212.

Moolla, A.I. 2010. *A Conceptual Framework to Measure Brand Loyalty.* PhD Thesis. North-West University, Potchefstroom.

Moolla, A.I. & Bisschoff, C.A. 2013. An empirical model that measures brand loyalty of fast-moving consumer goods. *Journal of Economics*, 4(1):1-9

Naidoo, K. 2011. Stress management and its impact on work performance of educators in public schools in KwaZulu-Natal. Potchefstroom: North-West University (Thesis – PhD).

Newsom, M. 2014. Some clarifications and recommendations on fit indices. https://www.google.co.za/#q=ecvi+CFA+model+fit+interpretation Date of access: 28 April 2015.

Nielsen, K., Yarker, J., Brenner, S. & Borg, V. 2008. The importance of transformational leadership style for the well-being of employees working with older people. *Journal of Advanced Nursing,* 63(5):465-475.

Otara, A. 2011. Perception: A Guide for Managers and Leaders. *Journal of Management and Strategy*, 2(3):21-24.

Parkes, L. 2011. Employee engagement. Igniting Passion through purpose, participation and progress. (***In***: California State University. http://www.fullerton.edu/cice/Documents/2013CEReport.pdf Date of Access: 1 Sep 2014).

Rahn, M. 2015. Factor analysis: The difference between confirmatory and exploratory factor analysis. http://www.theanalysisfactor.com/confirmatory-and-exploratory-factor-analysis/ Date of access: 10 April 2015.

Reilly, R. 2014. Five ways to improve employee engagement now. http://www.gallup.com/businessjournal/166667/five-ways-improve-employee-engagement.aspx Date of access: 20 April 2015.

Rich, B.L., Lepine, J.A. & Crawford, E.R. 2010. Job engagement: Antecedents and effects on job performance. *Academy of Management Journal,* 53(3):617-635.

Robinson, D., Perryman, S. & Hayday, S. 2004. The drivers of employee engagement. London: Institute for employment studies. http://www.employment-studies.co.uk/pubs/summary.php?id=408 Date of access: 17 June 2014.

Rowlands. 2006. Rowlands International. Survey results on perceptions between managers and employees. http://www.rowlandsonline.com/images/result_survey_ri_01.pdf Date of access: 20 March 2015.

Saintgifts. 2014. Effective tools for employee engagement. http://saintgits.org/main/sim/Activities/Employee%20Engagement%20An%20Effective%20Tool%20For%20Talent%20Retention.asp Date of access: 18 Apr. 2014.

Salim, S.F. 2011. An assessment of brand loyalty of banking clients. Potchefstroom: NWU. (Thesis – MBA).

Salkind, N.J. 2000. Exploring Research. 4th ed. Upper Saddle River, NJ: Prentice Hall.

Santos, J.R.A. 1999. Cronbach's alpha: A tool for assessing the reliability of scales. *Journal of Extension*, 37(2):1-15.

Schunn, C.D. & Wallach, D. 2012. Evaluating goodness-of-fit in comparison of models to data. http://www.lrdc.pitt.edu/schunn/gof/gof.doc&rct=j&frm=1&q=&esrc=s&sa=U&ei=7jtSVJaSOOLN7Qbg5YCIBQ&ved=0CBIQFjAA&usg=AFQjCNEKrdO-Ai2rr8oUsF5R6SNv1UeBJA Date of access: 30 Oct 2014.

Shadish, W., Cook, T. & Campbell, D. 2002. Experimental and quasi-experimental designs for generalized causal inference. Boston, MA: Houghton Mifflin

Shroeder-Saulnier, D. 2010. Employee engagement: Drive organisational effectiveness by building trust. Right Management: A manpower company. http://www.right.com/thought-leadership/e-newsletter/drive-organizational-effectiveness-by-building-trust.pdf Date of access: 17 June 2014.

Shuck, B. & Reio, T. 2013. Employee engagement and wellbeing: A moderation model and implications for practice. *Journal of Leadership and Organizational Studies*, 11(2):156-181.

Shuck, B., Reio, G. & Rocco, S. 2011. Employee engagement: an examination of antecedent and outcome variables, *Human Resource Development International,* 14(4):427-445.

Shukia, P. 2004. *T-Test and Factor analysis*. University of Brighton. http://www.pauravshukla.com/marketing/research-methods/t-test-factor-analysis.pdf. Date of access: 20 April 2011.

Shuttleworth, M. 2013. Predictive validity. https://explorable.com/predictive-validity Date of access: 25 Oct. 2014.

Sixsigma. 2014. Aveta Business Institute. Employee Engagement in the workplace environment.http://www.sixsigmaonline.org/six-sigma-training-certification-information/employee-engagement-in-the-workplace-environment.html Date of access: 20 March 2015.

Slåtten,T, & Mehmetoglu, M. 2011. Antecedents and effects of engaged frontline employees: A study from the hospitality industry. *Managing Service Quality: An International Journal,* 21(1):88-107.

Smit, S.J. & Beattie, V. 2010. Human capital, value creation and disclosure. *Journal of Human Resource Costing & Accounting*, 14(4):262-285.

Smyth, J. & Fasoli, L. 2007. Climbing over the rocks in the road to student engagement and learning in a challenging high school in Australia. *Educational Research,* 49(3):273-295

Sorenson, S. 2013. Don't pamper employees - engage them. http://businessjournal.gallup.com/content/163316/don-pamper-employees-engage.aspx . Date of access: 17 June 2014

SPSS ***See*** Statistical Package for Social Sciences

Stapleton, C.D. 1997. Basic concepts and procedures of confirmatory factor analysis. http://ericae.net/ft/tamu/Cfa.htm Date of access: 20 April 2015

Statistical Package for Social Sciences. 2010. Version 18. http://www-spss.co.in

Statistical Package for Social Sciences. 2014. Version 22 AMOS add-on included. http://www-01.ibm.com/software/za/analytics/spss/

Statistical Solutions. 2013. Confirmatory factor analysis. http://www.statisticssolutions.com/academic-solutions/resources/directory-of-statistical-analyses/confirmatory-factor-analysis Date of access: 17 April 2015

Steckler, P.H. & McLeroy, K.R. 2008. The Importance of External Validity. *American Journal of Public Health*, 98(1): 9-10, January.

Suhr, D.D. 2006. Exploratory or confirmatory factor analysis? http://www2.sas.com/proceedings/sugi31/toc.html. Date of access 17 April 2015.

Tang, Y., Xiong, K.M., Zhao, Y. & Zang, H.P. 2003. Studies of five microelement contents in human serum, hair and fingernails with aged hypertension and coronary heart disease. *Biology trace element resources*, 92(2):97-104.

TBS. 2011. *Public service employee survey: Focus on employee engagement*. http://www.tbs-sct.gc.ca/pses-saff/2011/engage-mobil-eng.asp Date of access: 10 June 2013.

Thayer, S.E. 2008. *Psychological climate and its relationship to employee engagement and organisational citizenship behaviours*. http://www.academia.edu/6709919/Employee_Engagement_and_Organizational_Effectiveness_The_Role_of_Organizational_Citizenship_Behavior.

The Corporate Executive Board. 2004. *Driving performance and retention through employee engagement*. New York, NY: The Corporate Leadership Council.

Towers Perrin. 2003. Working today: understanding what drives employee engagement. http://www.towersperrin.com/tp/getwebcachedoc /2003/200309/talent_2003.pdf Date of access: 15 August 2014.

Towers Perrin. 2007. Closing the engagement gap: A road map for driving superior business performance. http://www.biworldwide.com/info/ pdf/ Date of Access: 20 March 2015.

Towerswatson. 2012. Global Workforce Study: Engagement at risk: driving strong performance in a volatile global environment. http://www.towerswatson.com/Insights/IC-Types/Survey-Research-Results/2012/07/2012-Towers-Watson-Global-Workforce-Study Date of access: 10 May 2013.

Treasury Board of Canada Secretariat ***See*** TBS

Truss, C., Soane, E., Edwards, C., Wisdom, K., Croll, A. and Burnett, J. 2006. Working Life: Employee Attitudes and Engagement 2006. London, CIPD

Tugend, A. 2012. Praise is fleeting but brickbats we recall. http://www.nytimes.com/2012/03/24/your-money/why-people-remember-negative-events-more-than-positive-ones.html?_r=0 Date of access: 11 April 2015.

Vance, R.J. 2006. *Employee Engagement and Commitment*. New York: SHRM Foundation. http://www.vancerenz.com/researchimplementation/uploads /1006employeeengagementonlinereport.pdf Date of access: 12 June 2014.

Warner, P. 2013. What's the difference between Trait, State and Behavioural employee engagement. https://www.decision-wise.com/whats-the-difference-between-trait-state-and-behavioral-employee-engagement/ Date of access: 22 March 2015.

Williams, B., Brown, T. & Onsman, A. 2012. Exploratory factor analysis: A five-step guide for novices. *Australasian Journal of Para-medicine*, 8(3). http://ro.ecu.edu.au/jephc/vol8/iss3/1 Date of access: 21 April 2015.

Wuensch, K.L. 2009. Factor analysis – SPSS. FA-SPSS doc. SPSS Help Index. Version17. http://spss.com/software/statistics. Date of access: 6 May 2010.

Zen, C. 2007. Assess whole SEM model chi square and fit index. http://zencaroline.blogspot.com/2007/04/global-model-fit.html Date of access: 21 April 2015.

Zikmund, W.G. 2008. Business research methods. 7th ed. London: Thomson Learning.

APPENDIX A: QUESTIONNAIRE

NORTH-WEST UNIVERSITY
YUNIBESITI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT
POTCHEFSTROOM CAMPUS

Potchefstroom Business School

Prof CJ Botha
Tel (018) 299 1672
Fax (018) 299 1416
Email christoff.botha@nwu.ac.za

Dear respondent,

EMPLOYEE ENGAGEMENT

This questionnaire focusses on employee engagement drivers and its impact on retention in the workplace. The findings will form part of a doctoral study of **Ms Lailah Imandin**, an enrolled PhD student of the North West University.

Confidentiality

The questionnaire is anonymous and will be administered independently, thus guaranteeing respondents' confidentiality.

This is an opportunity to contribute to a research project that has a bearing on the work you do. This is by no means a test and there are no right or wrong answers, so please complete the questionnaire without any fears and as accurately and honestly as possible.

Thank you

Ms L Imandin

Work Wellness Research Program
Faculty: Economic and Business Sciences
Tel:+27(18)2991672
Fax/Faks : +27(18)2991416

BIOGRAPHICAL INFORMATION

- Please mark your answer with an "**X**" (where applicable).
- Please complete all questions.
- All information provided in this questionnaire will remain completely anonymous and confidential.
- Please be as honest and accurate as possible.

1. Gender

M	F

2. Age in years

< 25	25- 30	31 - 35	36 - 40	>40

3. Marital Status

Single	Married	Divorced	Widow/Widower

4. Home Language

Afrikaans ☐	English ☐	Sepedi ☐
Sesotho ☐	Setswana ☐	isiSwati ☐
Tshivenda ☐	IsiNdebele ☐	isiXhosa ☐
isiZulu ☐	isiTsonga ☐	Other ☐

If 'other' please name:_____

4. Education (what is your highest qualification)

Diploma	Degree	Honours/PG Diploma	Masters	Doctorate	Other

If 'other' please name:_____

5. Over the last 3 months, roughly how engaged have you felt in your job?

100 % engaged	90 – 99% engaged	80 – 89% engaged	70 – 79% engaged	Less than 70% engaged
☐	☐	☐	☐	☐

6. How long have you been employed by your current employer

< 5 years	6 – 10 years	11 – 20 years	>21 years	Self employed	Unemployed

EMPLOYEE ENGAGEMENT DRIVERS

Please mark the number that clearly indicates your attitude

1= Strongly Agree	2= Agree	3= Neutral	4= Disagree	5= Strongly Disagree
Item No	STATEMENT		SCALE	

No.	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
	Cognitive drivers					
1.	The work I do makes a contribution to the organisation	1	2	3	4	5
2.	I feel safe at work	1	2	3	4	5
3.	No one will make fun of me	1	2	3	4	5
4.	I have the resources to do my job at the level expected of me	1	2	3	4	5
5.	I believe that my work matters	1	2	3	4	5
6.	I believe that my work is meaningful	1	2	3	4	5
	Emotional engagement					
7.	I feel a strong sense of belonging to my organisation	1	2	3	4	5
8.	I can identify with my organisation	1	2	3	4	5
9.	I am proud to work at my organisation	1	2	3	4	5
10.	I have a good relationship with my manager	1	2	3	4	5
11.	I take pride in my work	1	2	3	4	5
12.	I feel a sense of pride about my company	1	2	3	4	5
13.	I feel my personality matches the image of the organisation	1	2	3	4	5
14.	I have a best friend at work	1	2	3	4	5
15.	I derive a sense of self-esteem from the company I work for	1	2	3	4	5
16.	I derive a sense of self-esteem from my work	1	2	3	4	5
17.	I am proud of my employer	1	2	3	4	5
18.	I believe that this is the best company to work for	1	2	3	4	5
	Behavioural Engagement					
19.	I really push myself beyond what is expected of me	1	2	3	4	5
20.	I work harder than is expected of me	1	2	3	4	5
21.	I believe in the organisation I work for	1	2	3	4	5
22.	I have a desire to improve my work	1	2	3	4	5
23.	I have an understanding of my organisation's business strategy	1	2	3	4	5
24.	I have the ability to collaborate with my colleagues	1	2	3	4	5
25.	I am willing to demonstrate extra effort in my work	1	2	3	4	5
26.	I am driven to continually enhance my skill set	1	2	3	4	5
27.	I do more than is expected of me	1	2	3	4	5
28.	I frequently think of quitting my job	1	2	3	4	5
29.	The mission of my organisation makes me feel my job is important	1	2	3	4	5

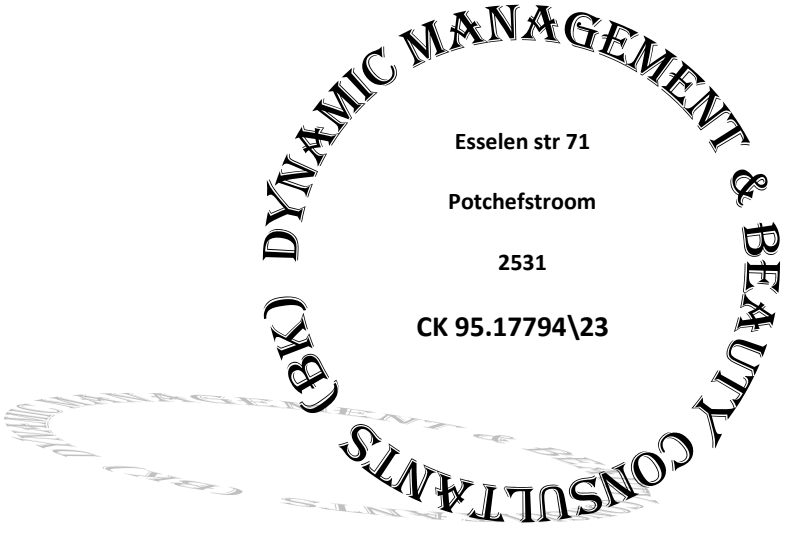
No.	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
	Feeling Valued and involved					
30.	I am involved in decision making in my organisation	1	2	3	4	5
31.	I am able to voice my ideas	1	2	3	4	5
32.	My organisation demonstrates care for its employee	1	2	3	4	5
33.	I rarely feel my work is taken for granted	1	2	3	4	5
34.	In the last seven days, I have received recognition for doing good work	1	2	3	4	5
35.	At work my opinions seem to count	1	2	3	4	5
	Having an engaged leadership team					
36.	My leadership team is able to build trust with me as an employee	1	2	3	4	5
37.	My leader/manager communicates effectively with me	1	2	3	4	5
38.	My leader/manager is responsible for building a fulfilling work environment	1	2	3	4	5
39.	My leader/manager is flexible in understanding individual needs	1	2	3	4	5
40.	My leader/manager is responsible for developing talent	1	2	3	4	5
41.	My leader/manager is responsible for coaching team members	1	2	3	4	5
42.	My leader/manager reinforces high levels of performance	1	2	3	4	5
43.	My leader/manager is responsible for engaging necessary knowledge	1	2	3	4	5
44.	My leader/manager continuously monitors engagement issues	1	2	3	4	5
45.	My leader/manager identifies appropriate team members for the team.	1	2	3	4	5
46.	My organisations leadership acts with the best interest of employees in mind	1	2	3	4	5
47.	Team work is encouraged at my workplace	1	2	3	4	5
48.	My leader/manager at work encourages my development	1	2	3	4	5
	Trust and Integrity					
49.	My manager/leader cares about their employees	1	2	3	4	5
50.	My manager/leader listens to my opinions	1	2	3	4	5
51.	My manager/leader is trustworthy	1	2	3	4	5
52.	My manager/leader "walks the talk"	1	2	3	4	5
53.	I believe that my senior manager/s have integrity	1	2	3	4	5
54.	My manager is someone I can trust	1	2	3	4	5
55.	My manager provides me with ongoing feedback that helps me improve my performance	1	2	3	4	5
56.	In the last six months, someone at work has talked to me about my progress	1	2	3	4	5
	Nature of my job					
57.	I am able to participate and engage in my work	1	2	3	4	5
58.	I am given autonomy in the work that I do	1	2	3	4	5

No.	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
59.	I am satisfied with the work that I do	1	2	3	4	5
60.	Employees are trusted with a job	1	2	3	4	5
61.	Employees accept the responsibilities that come with the job	1	2	3	4	5
62.	Employees complete their jobs in the stipulated time intervals	1	2	3	4	5
63.	At work, I have the opportunity to do what I do best every day	1	2	3	4	5
64.	I understand my company's objectives	1	2	3	4	5
	The connection between individual and company performance					
65.	I am familiar with the current levels of performance at my company	1	2	3	4	5
66.	I understand how to contribute to achieving the levels of performance	1	2	3	4	5
67.	Top management allows free flow of information	1	2	3	4	5
68.	Employees are aware of updates	1	2	3	4	5
69.	The company communications I receive help me to understand my company's strategy	1	2	3	4	5
70.	I know what is expected of me at work	1	2	3	4	5
71.	My associates or fellow employees are committed to doing quality work	1 1	2	3	4	5
72.	Free exchange of information is possible without any barriers.	1	2	3	4	5
	Career Growth opportunities					
73.	I have opportunities for career growth at my company	1	2	3	4	5
74.	I have opportunities for promotion at my company	1	2	3	4	5
75.	I have a clearly defined career path	1	2	3	4	5
76.	I am satisfied with my opportunities for career progression	1	2	3	4	5
77.	I am on an Management Development Programme (MDP) at my company	1	2	3	4	5
78.	Efforts are made to develop my skills at my company	1	2	3	4	5
79.	There is someone at work who encourages my development	1	2	3	4	5
80.	Employees are encouraged to participate in decision making	1	2	3	4	5
81.	This last year, I have had opportunities at work to grow	1	2	3	4	5
	Stress free environment					
82.	Employees are able to put forth their best efforts.	1	2	3	4	5
83.	Employees can be innovative	1	2	3	4	5
84.	Employees can be creative	1	2	3	4	5
85.	Innovation is encouraged in my organisation	1	2	3	4	5
86.	Employees are encouraged to be innovative	1	2	3	4	5
	Change Management					
87.	Employees are encouraged to face new challenges	1	2	3	4	5
88.	Employees are encouraged to handle new challenging tasks	1	2	3	4	5

No.	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
89.	Employees are encouraged to be flexible	1	2	3	4	5
90.	Employees are encouraged to adapt to new situations	1	2	3	4	5
91.	Employees are engaged to their jobs	1	2	3	4	5
92.	Employees are attached to their jobs	1	2	3	4	5
93.	Employees understand the need to change	1	2	3	4	5
94.	Employees are ready to deal with changes	1	2	3	4	5

Thank you for your participation!

APPENDIX B: LETTER FROM LANGUAGE EDITOR



1 May 2015

To whom it may concern

Re: Letter of confirmation of language editing

The PhD thesis "*Developing a conceptual framework to analyse engagement and disengagement in the workplace"* was language, technically and typographically edited. The sources and referencing technique applied was checked to comply with the specific journal guidelines provided for the articles.

Antoinette Bisschoff

Officially approved language editor of the NWU

Member of SA Translators Institute