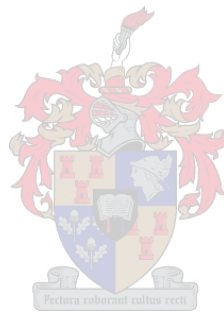


**ANTECEDENTS OF FRONTLINE SERVICE INNOVATION WITHIN AN  
AGRICULTURAL RETAIL, TRADE AND SERVICES ORGANISATION WITHIN  
THE WESTERN CAPE**

by  
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University.

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## DECLARATION

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## ABSTRACT

Research on innovation in services is limited and it is only since the Gross Domestic Profit (GDP) of services sectors in most developed countries have started to exceed that of manufacturing, that the need for research has increased. Apart from the dramatic growth in services, the continuous increase in business competition justifies more research on the manifestation and reinforcement of innovative behaviour on the individual frontline level.

This study explored and empirically evaluated a theoretical model that identifies antecedents of *Frontline Service Innovation* amongst frontline employees within an agricultural retail, trade and services organisation within the Western Cape. The nomological network of latent variables included *Frontline Service Innovation*, *Psychological Ownership*, *Emotional Intelligence*, *Empowering Job Characteristics*, *Innovative Organisational Climate*, *Psychological Safety*, *Creative Self-Efficacy* and *Empowering Leadership*.

The data was collected by means of a self-administered paper-and-pencil questionnaire and 150 questionnaires in total were completed. The measurement model was statistically evaluated by means of Partial Least Squares Structural Equation Modelling (PLS-SEM) and, where necessary, Linear Structural Relations (LISREL), but only PLS-SEM was utilised for the statistical evaluation of the structural model.

The most important findings of the current study were that both *Emotional Intelligence* and *Creative Self-Efficacy* had a significant direct relationship with *Frontline Service Innovation* and *Creative Self-Efficacy* mediated the relationship between *Empowering Job Characteristics* and *Frontline Service Innovation*. In addition, the relationships between *Empowering Leadership* and *Innovative Organisational Climate*, *Empowering Job Characteristics* and *Creative Self-Efficacy*, *Empowering Job Characteristics* and *Psychological Ownership*, and *Empowering Job Characteristics* and *Psychological Safety* were established as being significant, with the mediating effect of *Innovative Organisational Climate* on the relationship between *Empowering Leadership* and *Psychological Safety* also being significant.

This study richly contributes to research on service innovation. The limitations of the current research project are discussed along with recommendations regarding future research. The findings have enabled the researcher to discuss the practical implications thereof and to recommend a number of interventions aimed at facilitating *Frontline Service Innovation* in similar organisations.

## OPSOMMING

Navorsing oor innovasie in dienste is beperk en het eers in die meeste ontwikkelde lande 'n toename getoon nadat die Bruto Binnelandse Produk (BBP) van die dienstesektore dié van vervaardiging begin oorskrei het. Benewens die dramatiese toename in dienste, regverdig die deurlopende toename in besigheidsmededinging die manifestering en versterking van gedrags-innovasie-patrone op die individuele kontakdiensvlak.

Hierdie studie het 'n teoretiese model, wat die oorsaaklike faktore van *Kontakdiens-Innovasie* onder kontakdienswerkers wat in 'n landbou kleinhandel-, handel- en dienste-organisasie in die Wes-Kaap werkzaam is, ondersoek en empiries geëvalueer. Die nomologiese netwerk van latente veranderlikes het onder meer *Kontakdiens-Innovasie*, *Sielkundige Eienaarskap*, *Emosionele Intelligensie*, *Bemagtigende Poseienskappe*, *Innoverende Organisasieklimaat*, *Sielkundige Veiligheid*, *Kreatiewe Selfbekwaamheid* en *Bemagtigende Leierskap* ingesluit.

Die data is ingevorder by wyse van 'n self-geadministreerde papier-en-potlood vraelys en 150 vraelyste is voltooi. Die metingsmodel is statisties geëvalueer deur middel van "Partial Least Squares Structural Equation Modelling (PLS-SEM)" en, waar nodig, "Linear Structural Relations (LISREL)", maar slegs "PLS-SEM" is aangewend ten einde die strukturele model te evalueer.

Die belangrikste bevindinge wat die studie opgelewer het is dat beide *Emosionele Intelligensie* en *Kreatiewe Selfbekwaamheid* 'n beduidende positiewe verwantskap met *Kontakdiens-Innovasie* toon, en *Kreatiewe Selfbekwaamheid* die verwantskap tussen *Bemagtigende Poseienskappe* en *Kontakdiens-Innovasie* bemiddel. Daarmee saam is daar bevind dat die verwantskappe tussen *Bemagtigende Leierskap* en *Innoverende Organisasieklimaat*, *Bemagtigende Poseienskappe* en *Kreatiewe Selfbekwaamheid*, *Bemagtigende Poseienskappe* en *Sielkundige Eienaarskap*, en *Bemagtigende Poseienskappe* en *Sielkundige Veiligheid* beduidend is, met die bemiddelende effek van *Innoverende Organisasieklimaat* op die verwantskap tussen *Bemagtigings Leierskap* en *Sielkundige Veiligheid* wat ook beduidend is.

Hierdie studie dra ryklik by tot navorsing oor dienste-innovasie. Die beperkinge van die toepaslike navorsingsprojek word tesame met aanbevelings vir toekomstige navorsing bespreek. Die bevindinge het die navorser in staat gestel om die praktiese implikasies daarvan te bespreek en 'n aantal intervensies, wat daarop gerig is om *Kontakdiens-Innovasie* in soortgelyke organisasies te verbeter, aan te beveel.

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## CHAPTER 1

### INTRODUCTION AND OBJECTIVES OF THE STUDY

#### 1.1 INTRODUCTION

Economic prosperity is grounded on the final demand for goods and services. The global economic climate is primarily governed by consumer desires. This phenomenon is referred to as consumer sovereignty and accordingly consumers, as a source of demand, are fundamental to economic stability and growth (Goodwin, Nelson, Ackerman, & Weisskopf, 2008).

The current economic milieu is extremely volatile as consumer demands tend to evolve at an ever-increasing rate. Organisations are forced to keep up with market trends and have to continuously adjust their product and service offerings. Together with the digital revolution multiple factors that can either threaten or promote organisational growth, should be considered. Round the clock access to the internet has led to customers being more knowledgeable and spoilt for choice with regard to services and products. Social media have created interactive platforms that enable broad and instant customer communication forums. Moreover, technology enables organisations to speed up the service delivery process by placing a premium on the ease of access by means of self-service (Machando & Diggins, 2013).

Organisations must be geared to continuously adapt to the changing market environment and customer demands (Vos, 2010). The mere supply of products and services is therefore no longer enough, and organisations are required to differentiate themselves from the competition by utilising their resources effectively and innovatively so as to ensure growth and sustainability (Aucamp, 2014). Customisation has become the new buzzword and with customers increasingly demanding personalisation, it is likely that this practice will grow rapidly in the very near future. The trend of mass production, duplication and generic impersonal electronic services (e.g. telesales) has shifted towards improved customer relations through emotional connectedness, individualised attention and an overall unique customer experience.

### 1.1.1 Services and Innovation

Over the last three decades, there was a considerable spike in the scale and complexity of services. Globalisation, accelerating markets such as China and India, and political and social reform all had a drastic effect on the service industry and consequently forced organisations to review and adjust their service approach (Vos, 2010).

Services are currently the main driver of economic growth in most developed countries – typically 70% to 80% of the gross domestic product (GDP) (Bettencourt, 2010). In emerging markets this proportion is distributed around the 50% mark. In comparison to the other emerging markets the South African economy has an unusual sectoral structure. More than 60% of the South African GDP is contributed by the service sectors (Fedderke, 2014).

Services are no longer limited to the traditional service sectors and the growth of services in the manufacturing industry has been significant. Manufacturing firms are now offering services that either supplements their product sales or which expands beyond their product offerings. According to literature this phenomenon is termed “servitization” which means that manufacturing firms now sell solutions in addition to their products with the aim of differentiation in order to gain the competitive advantage (Vos, 2010). Although the importance of the service industry is widely recognised, it generally seems to receive less attention than the other parts of economies worldwide. Likewise, innovation in services does not nearly receive as much attention and recognition in comparison to innovation in the manufacturing and technological sectors. The neglect of service innovation is predominantly ascribed to society’s historic habitual fascination with tangible, relatively static products and hard technology. (Bitner, Ostrom, & Morgan, 2007).

There are typically two aspects which complicates the research on innovation in services. The first refers to the multidisciplinary analysis that is required. Services have such a broad reach with different knowledge territories, a variation in clientele and technological application. A multidisciplinary approach will thus better equip one to distinguish between the innovative initiatives required within the services industry. The second complicating matter is the extremely high level of heterogeneity of services. Apart from the differences between hospitality and financial services firms, there are also differences within these industries, e.g. a conference hotel’s operations differ completely from that of a leisure hotel. This example includes intrasectoral, as well as intersectoral heterogeneity. The characteristics of different service forms can therefore vary greatly and innovative activities aren’t always comparable (Vos, 2010).

The most current research on innovation in the service industry is rather fragmented and limited. The dramatic growth in services, the continuous increase in business competition and the heterogeneous nature of services definitely justify more research on the manifestation and reinforcement of innovative behaviours on the individual frontline level in this sector.

### **1.1.2 South African Agricultural Retail, Trade and Services Organisations and Innovation**

Cooperatives are defined as “member-owned, member-controlled, and member-benefiting governance structures” (Dunn, cited in Liang, Huang, Lu, & Wang, 2015, p. 50). Relative to other, investor-oriented businesses, agricultural cooperatives (i.e. user-oriented businesses) are quite unique in that the members, also those that purchase the goods and utilise the services of the business, own and democratically control the business. The board of directors is typically elected by the members from their ranks. As a collective body, cooperatives empower their members to improve their economic status in that it enhances their bargaining power, provides access to competitive markets and gives them the chance to capitalise on new market opportunities (Ortmann & King, 2007). Although the aforementioned has merit, the *raison d’être* of cooperatives is to serve their members – “they generate turnover by providing services [and products] to members without generating profit as their first motivation” (Roelants, Hyungsik, & Terrasi, 2014, p. 70).

Various types of agricultural cooperatives, depending on the interests and needs of their members, have been established worldwide. The product and service offerings of these cooperatives range from “financial services, equipment and farm supplies, marketing of agricultural products, consumer goods, utilities (e.g., electricity, telephone), housing, and other services (e.g., insurance)” (Ortmann & King, 2007, p. 43). Agricultural cooperatives can be classified into three overarching categories. Firstly, marketing cooperatives manufacture and process farm products which they then sell at a collectively negotiated price. Secondly, farm supply cooperatives function predominantly as retailers of products which they either purchase in large volumes or manufacture, process or prepare and distribute. These product offerings include seed, feed, fertilizer, chemicals, farm equipment, hardware and building supplies. And lastly, service cooperatives render services like transport, storage, fumigation, mechanical and technical support, irrigation, artificial insemination, utilities, credit and insurance. A cooperative may be classified in more than one of the categories and generally tend to vary immensely in terms of the functions performed and in size (Ortmann & King, 2007). Based on this diversification of service and product offerings it is evident that agricultural cooperatives are



required to employ a wide spectrum of salaried staff in order to effectively see to its members' needs. Frontline Employees (FLE's), vary from shop attendants, cashiers, store keepers, mechanics to a consortium of specialist consultants (Schwettmann, 2000).

Since South Africa's democratisation in 1994, some agricultural cooperatives became public companies as a means to protect their members' interests in the face of economical and political instability and change. As such their members became the shareholders and the size of their shares were determined by their respective production volumes. Although these status changes occurred, farmers (i.e. former members) continued to serve on the board of directors of these "new" entities. Consequently, not much transformation has taken place as most of these companies are still managed in the "same old way" as they were before (Ducastel & Anseeuw, 2018, p. 7). It is only over the last decade that a few of these former agricultural cooperatives opted for JSE (Johannesburg Stock Exchange) listing and as such, private equity should supposedly influence business strategies, models and management style. Despite the now varied statuses of these former agricultural cooperatives, the management and employment principles and practices are still rooted in their former dispensation and as such very little has changed on the shop floor. The member merely became a shareholder or a premium customer, but they still have a lot of power, albeit formal or informal, in business decisions. For the purposes of the current research study, these former agricultural cooperatives will hereinafter be referred to as agricultural retail, trade and services organisations.

The existence of agricultural retail, trade and services organisations are still predominantly dependent on the farmers' or shareholders' (i.e. former members) transactions and performance is thus measured by the quality of the relationships that are built and maintained by FLE's with these stakeholders. In the contemporary investment-oriented firms this will be considered marketing, but the previous or current dual nature of farmers' status as user and in some instances owner, brings about a distinctive relationship between farmer and employee (Roelants et al., 2014). During informal discussions with the FLE's of these organisations it appeared that their biggest challenge is to deal with irate farmer-customers. They suggest that some of the farmers have an inflated sense of superiority and demand more favourable treatment compared to that of public customers or farmers with smaller accounts. Moreover, they say that the service expectations vary extensively from one farmer to another and every service offering is a performance review in itself.

These employees are of the opinion that FLE's in this context has to be extremely versatile, thick-skinned, should exhibit excellent interpersonal skills and have the ability to think out-of-the-box in order to accommodate and cater for the diverse needs and personalities of their customers (FLE's, personal communications, September 2012, April 2013, August 2013).

Cultivating and instilling a culture of innovation within South African agricultural retail, trade and services organisations could be, for various reasons, rather challenging. Some are of the opinion that agricultural retail, trade and services organisations in South Africa have over the years inhibited entrepreneurship amongst the farmers – the very same individual who either currently or used to serve on the board of directors and has to provide leadership and strategic direction to these businesses (A.J. Louw, personal communication, 21 March 2017). The South African agricultural industry still seems to employ a more traditional management approach. This seemingly has a significant influence on the organisational culture of these enterprises which is often described as patriarchal, autocratic, oppressive and beaurocratic – all which are considered debilitating to the manifestation and reinforcement of innovative behaviour amongst the workforce. Moreover, agricultural retail, trade and services organisations are generally situated in rural, farming communities where there is limited access to skilled labour. The employees of such organisations often tend to lack technical, specialist and managerial skills. Consequently, these employees, with specific reference to the FLE's, are unlikely to display innovative problem-solving behaviour.

## **1.2 RATIONALE FOR THE CURRENT STUDY**

The economic role or gross domestic profit of the South African agricultural industry is rapidly declining. Nonetheless, it is deemed a vital economic sector due to its contribution to food supply and security, job creation and maintenance of the country's trade balance. Agricultural retail, trade and services organisations have long been recognised for their role in preventing market failures (i.e. the exploitation of small-scale farmers) and short-circuiting the supply chain. They have a long-standing commitment towards their customers to improve their living conditions by looking after their business interests (South African Government, Department of Agriculture, Forestry and Fisheries, 2012).

With the changes in the current turf of the agricultural retail, trade and services organisations (former agricultural cooperatives), together with the younger generation farmers coming of age, customer retention, loyalty and patronage may become more challenging. Thus, the role of FLE's within South African agricultural retail, trade and services organisations should not be underestimated and these organisations are urged to invest in “the face of their company”.

Innovation may possibly be one of the key ingredients that could enhance the service offering and experience, and as such strengthen the relationship between the FLE and the farmer-customer. Accordingly, the rationale of this study is to investigate what characteristics, on various organisational levels, will typically activate and promote innovative service offerings in the frontline.

### **1.3 RESEARCH INITIATING QUESTION**

What are the antecedents of Frontline Service Innovation (FLSI) among FLE's employed by an agricultural retail, trade and services organisation within the Western Cape?

### **1.4 RESEARCH OBJECTIVE**

The main objective of the current research study is to investigate and empirically test a theoretical model representing antecedents of FLSI among FLE's employed by an agricultural retail, trade and services organisation within the Western Cape.

This research study aims to:

- Identify the most salient antecedents of FLSI among employees employed by an agricultural retail, trade and services organisation operating in the Western Cape;
- Propose and test an explanatory FLSI structural model; and
- Confirm the managerial implications of the research findings and recommend practical interventions to increase FLSI among FLE's employed by an agricultural retail, trade and services organisation operating in the Western Cape.

### **1.5 STRUCTURE OF THE THESIS**

Chapter 1 provides an introduction to innovation and the critical influence this has on economic growth. Subsequently, a brief discussion of service innovation and how little this form of innovation has been subjected to scientific research in comparison to manufacturing or product innovation will follow. An overview of the existence, history and role of agricultural cooperatives and the transformation of these businesses to public companies (i.e. agricultural retail, trade and services organisations) within the new political dispensation in South Africa is provided. Moreover, the lack of innovation within agricultural retail, trade and services organisations, and the importance of the FLE in achieving the objectives of such businesses are discussed. Lastly, the rationale for the study, the research initiating question and the research objectives are presented.

Chapter 2 is an in-depth overview of the literature which aims to satisfy the theoretical objective of the research study. Moreover, the current researcher defines each of the latent variables within the parameters of extant research and explores the possible relationships between these variables. In conclusion a theoretical model, a graphic illustration of these theorised relationships between the variables, is presented.

Chapter 3 presents the methodology that was applied in this empirical, exploratory research study. The research design, the participants, the measuring instruments, ethical considerations, missing values and the statistical analyses are all topics that are discussed in this chapter. Further to this, the research hypotheses are proposed.

In Chapter 4 the research results, obtained from the statistical analyses, are reported on.

In conclusion, inferences are drawn from the research results and the managerial implications thereof are discussed in Chapter 5. This is followed by the proposed practical interventions and a breakdown of the limitations presented by the current research study. Lastly, recommendations for future research are made.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

It is becoming more challenging for the contemporary organisation to survive and prosper in today's dynamic and highly competitive marketplace, due to economic deterioration, technological advancement, and globalisation. These circumstances force organisations to adopt certain practices, policies and concepts (AL-Dmour & Basheer, 2012) in an attempt to prolong its lifespan. Cant, Brink, and Brijball (2006) believe that marketing is the key determinant of an organisation's (whether they are in the business of products, services or both) long-term survival.

Organisations can better market themselves by means of differentiation. An important way of differentiation is for organisations to distance themselves from the former "one size fits all" approach (Wilder, Collier, & Barnes, 2014). As Katz puts it: "An organi[s]ation that depends solely on its blueprints of prescribed behaviour, is a very fragile social system" (De Jong & Den Hartog, 2007, p. 41). Customers' service expectations have shifted towards individualised customisation that is easily accessible and readily available. The rapid change brought about by globalisation thus requires of organisations to personalise their products and services. Organisations can typically achieve this by capitalising on their technological capacity, but most importantly, capitalising on their human capacity in order to address their customers' personalised desires.

Over the last two decades, customers' needs have become diverse and extremely intricate. With ever increasing life demands, customers no longer want to spend valuable time searching for solutions. Although technology has simplified and speeded up service delivery, it is highly unlikely that customer needs could be completely satisfied in the absence of the human element. The ability to process sensory information, consider all possible solutions, select the best solution and subsequently react thereupon are still reserved for humans only. Technology can provide pre-set, standardised solutions whereas the human can produce unique solutions.

#### **2.2 CONSTRUCT CLARIFICATION**

The following section will provide a brief overview of constructs related to the marketing concept and marketing orientation, innovation, corporate entrepreneurship in services, as well as axioms of service innovation and frontline service innovation.

## 2.2.1 Marketing Concept and Market Orientation

The marketing concept is the crux of all marketing practices and is one of the oldest and most renowned terms in the discipline of marketing (Svensson, 2001). In the 1950's the philosophical foundation of the marketing concept was founded, and the advocates of this concept argued that an organisation's existence revolves around customer satisfaction (AL-Dmour & Basheer, 2012). The Business Dictionary defines the marketing concept as a "[m]anagement philosophy according to which a firm's goals can be best achieved through identification and satisfaction of the customers' stated and unstated needs and wants" (Marketing concept, n.d.). The marketing concept is renowned for its outside-in approach, starting with a definite *target market* (well-defined target market) (Jeremiah, Ojera, Isaac, Oginda, & Aila, 2013) followed with a *customer orientation* (extent to which organisations attempt to understand and meet their customers' needs, demands and preferences) (Cant et al., 2006), *integration* (organisation as a whole collaborates effectively in order to serve and satisfy the customer) or coordination of organisational activities and finally *profitability* (to achieve business goals) (Kotler, 1997).



*Figure 2.1* The Four Pillars of the Marketing Concept. Adapted from "Misunderstood marketing," by B. Jud, n.d., Retrieved on November 23, 2015, from <http://www.bookmarketingworks.com/MarketingvsSelling.htm>.

Kohli and Jaworski (1990) differentiate between the marketing concept and marketing orientation (AL-Dmour & Basheer, 2012). They are of the opinion that the marketing concept is a business or management philosophy, whereas the marketing orientation refers to the actual implementation of the marketing concept. The marketing orientation evolved through the production and sales orientations which preceded the marketing orientation.

The production orientation came into being with the rise of the industrial revolution in the late nineteenth century. During this time businesses used to have an internal focus as their products or services were determined by their strengths (i.e. that which they can do best or produce most efficiently with the resources at their disposal). The greatest limitation that this orientation had is that it failed to consider whether the goods or services which the organisation offered are aligned to the marketplace. Soon organisations realised that in an increasingly competitive environment it was not merely enough to produce goods, but a demand had to be created for such goods by means of persuasion. Subsequently, the sales orientation emerged. This orientation was grounded upon the principle that the consumer would purchase more if hard sales techniques were utilised. The greatest limitation of the sales-orientation was the ignorance to realise the needs of the marketplace. Despite the quality of products and the force of their sales, sales-oriented organisations found that they could not persuade the consumer to purchase products or services that they do not want or need (Cant, et al., 2006).

In contrast to the product and sales orientations that are grounded upon the principle of “sell what you make”, the marketing orientation promotes the principle of “make what you can sell”. Organisations that perceive the satisfaction of customers’ needs as their main priority displays a marketing orientation. After World War II the approach of organisations to the market changed significantly. The consumer’s needs became more sophisticated and consequently the gap between the producer and the consumer widened. The infrastructure and resources used to produce war material was available to satisfy the demand for a variety of ordinary consumption goods. Due to the myriad of products that were available competition spiked and that was when organisations recognised the significance of the marketing function. Based on the marketing orientation, businesses are thus defined by what the consumer think they are purchasing (their perceived value) and not that what the organisation thinks it is producing (Cant et al., 2006). Businesses that apply the marketing orientation tend to be customer-centred and are inclined to “sense-and-respond” as opposed to product-centred businesses that “make-and-sell” (Jeremiah et al., 2013, p. 309).

Rohit and John (1998) proved that companies that have a marketing orientation achieved better business results (Jeremiah et al., 2013). Despite this there are still a vast majority of organisations that have failed to implement the marketing orientation. The reason being that their understanding of it is to produce products or offer services which they believe the customer needs. Organisations moreover fail to do active research with regards to the expressed and latent needs of customers. Kotler (1991) states that even organisations with a marketing department or division do not guarantee a marketing-oriented company (Jeremiah et al., 2013).

### 2.2.2 Innovation

The word innovation is derived from the Latin word “innovare” which means to “renew” or to “make new” (Clapham, 2003, p. 366). Novelty appears to be the common denominator of most of the definitions of innovation. In addition to novelty, the general notion is that an innovation needs to be useful in order to distinguish it from an invention, which may not necessarily have practical application. With the aim to make business sense, an innovation that is useful is more likely to contribute to the organisation’s performance (Read, 2000).

Within an organisation the definition of innovation may however vary significantly due to the different conceptualisations and dimensions that may come into play and thus it needs to be clarified for the purposes of the current research study. This definition needs to incorporate the differentiation between innovation and creativity, the innovation intensity and the level of analysis. A brief discussion of these concepts is provided below.

According to Smith innovation is regarded a process-like form of problem-solving that starts with the desire for change and concludes with the effective implementation of an idea (Clapham, 2003). Creativity and innovation are often portrayed as two distinct concepts that are used interchangeably in the literature (Slåtten, Svensson, & Sværi, 2011). There seems to be consensus that creativity is defined as a cognitive activity during which the individual generates novel ideas, whereas innovation is a state of behavioural readiness during which these novel ideas are operationalised.

Other authors tend to view creativity and innovation as an integrated, sequential two-stage innovation process. Amabile is of the opinion that innovation is dependent on creativity, which marks the front-end of the process, whereas innovation is the output of creativity (as cited in McLean, 2005).

Creative engagement seems to be more fundamental in nature as this must precede the application of innovation. Similarly, Amabile, Schatzel, Moneta, and Kramer are of the opinion that “all innovation begins with creative ideas” (Slåtten et al., 2011, p. 271). Thus, creativity and innovation are related and when integrated the innovation process is produced. Slåtten et al. (2011) refer to the phases of this process as creative engagement (creativity) and innovative behaviour (innovation) respectively.



Most of the definitions conceptualise creativity as the thought processes which produce new insights or solutions. This definition can be applied to different levels, such as the individual, organisation, industry and professional levels. Within the organisational context, creativity refers to the identification of problems and opportunities and the generation of novel and useful product, service, and process designs, by individuals or groups (Martins & Terblanche, 2003). As opposed to creativity, innovation is a behavioural construct which is an observable and tangible concept and refers to the adoption or implementation of new products, processes and services on all dimensions of organisational activities (Ndubisi, 2014).

The literature distinguishes between incremental and radical innovation. Accordingly, innovation can be placed on a continuum based on the degree of change that is required to innovate (Read, 2000) or also often referred to as the innovation intensity. Norman and Verganti (2012, p. 5) refer to incremental innovation as advances within an existing paradigm of solutions - "doing better what we already do" and radical innovation as a change of frame - "doing what we did not do before".

Although radical innovation is the ultimate goal of most design studies, the success rate is low, it occurs infrequently within a particular field (every 5-10 years), is time consuming, and is usually expensive. As opposed to radical innovation, incremental innovation refers to the small, continual changes that enhances the effectiveness and lowers the cost of the product or service. However, both types of innovation is needed - in the absence of radical innovation incremental innovation hits a ceiling, and the potential of radical innovation may remain untapped in the absence of incremental innovation (Norman & Verganti, 2012).

Levels of analysis are defined as "categories or classifications of entities in a hierarchical order, such that higher levels (such as collectivities) encompass or include lower levels of analysis (such as persons)" (Naughton, 1988, p. 51). Miller also portrays levels of analysis as a hierarchy from lower to higher levels (i.e. individuals, groups and organisations). Similarly, Rousseau suggests that organisations consist of numerous groups and in turn such groups consist of numerous individuals. According to these descriptions it is apparent that within organisations the very nature and characteristics of these integral units differentiate them from one another. Organisational behaviour is thus a discipline of inquiry that is recognised for its multiple levels of analysis. Whilst elementary fields of study merely consider single levels of analysis, organisational behaviour studies individual, dyadic, group, organisational and at times environmental levels of analysis (Naughton, 1988). Costa, Graça, Marques-Quinteiro, Santos, Caetano, and Passos (2013, p. 1) refers to these levels as "interacting organisational

layers” which either have a top-down, bottom-up or bi-directional interdependent influence on one another.

Due to constant novel change in the external environment, organisations act as open systems with its multiple levels being very susceptible to change and they are required to adapt continuously thereto. Gupta, Tesluk, and Taylor (2007) refer to this process of adaptation as innovation. They believe that all change, whether it is evolutionary or revolutionary, requires innovation and that this not only applies to society, but to each subsystem of which it comprises, whether it be countries, communities, industries, organisations, groups and individuals.

Based on the aforementioned concepts it is thus clear that innovation is a multidimensional, overarching, contingent construct. Innovation, for the purposes of the current research study, is defined as “behaviour directed towards the initiation and application (within a work role, group or organisation) of new (incremental or radical) and useful ideas, processes, services, products or procedures” that contribute to the improvement of the organisation’s performance (De Jong & Den Hartog, 2007, p.43).

### **2.2.3 Corporate Entrepreneurship in Services**

Corporate entrepreneurship is defined as the cultivation of an entrepreneurial culture within organisations as a means to improve the organisation’s innovative capacity (Swart, 2013). Corporate entrepreneurship differs from individual entrepreneurship on many levels, of which the most notable is that corporate entrepreneurship is a manifestation of organisational behaviour (Salunke, Weerawardena, & McColl-Kennedy, 2013) as opposed to individual behaviour.

Based on the work of Covin and Slevin, entrepreneurial behaviour on operational level constitute the facets of “innovativeness (the seeking of creative solutions to problems or needs), risk-taking (the willingness to commit significant levels of resources to pursue entrepreneurial opportunities with a reasonable chance of failure), and proactiveness (doing what is necessary to bring pursuit of an entrepreneurial opportunity to completion)” (Kuratko & Audretsch, 2013, p. 325).

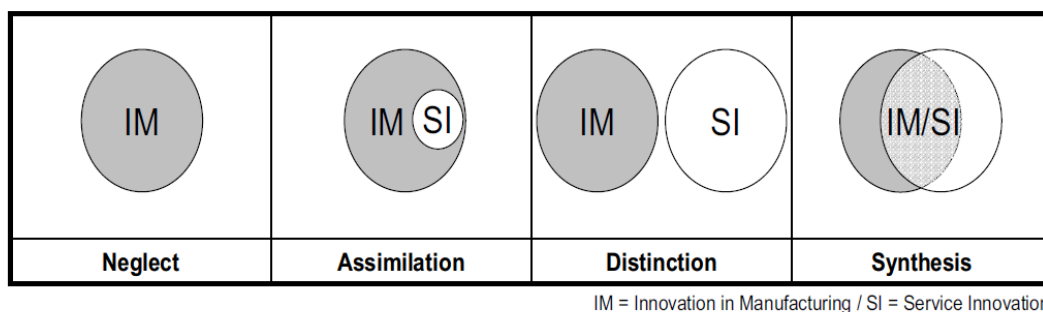
Salunke et al. (2013) refer to service entrepreneurship as a bifurcation of corporate entrepreneurship. However, Bettencourt and Gwinner (1996) distinguish between these types of entrepreneurship by adding an additional dimension of adaptiveness (the organisation’s

adaptation in response to the customer's unique requirements and customisation of the service offering) to reinforce the behavioural entrepreneurship construct within the service setting (Salunke et al., 2013). Their research showed that whilst innovativeness, risk-taking and proactiveness are important entrepreneurial behavioural constructs, service firms in specific should exhibit adaptiveness at the customer interface.

### 2.2.3.1 Axioms of service innovation

The primary focus of innovation in research is on technological artefacts, better known as product development (Droege, Hildebrand, & Frcada, 2009). Despite the evolution and dominance of services in most developed economies, little research about the process related to the development and implementation of new or adapted services have been conducted. Service innovation was first introduced in the 1980's, but scientific research has neglected it to a great extent (Ettlie & Rosenthal, 2011).

Currently, there exists an entrenched axiom of developmental phases (although there is still disagreement about the naming of the phases) or conceptual frameworks. These conceptual frameworks can be clustered around three perspectives of service innovation (Howells, 2010, p.68). These theories are built upon the following: The extent to which innovation is endogenous to the sector and to what extent it is associated with technological transformation; the degree of congruence between service innovation processes and the existing models (specifically those related to the manufacturing industry) of innovation (Howells, 2010). As such the following three conceptual frameworks emerged, namely: the assimilation approach, the demarcation approach and the synthesis approach (Gallouj & Windrum, 2008).



*Figure 2.2.* Evolution in Service Innovation Research. Adapted from "A practical introduction to service innovation," by A. Fischer, 2009, In A.S. Kazi, P. Wolf, & P. Troxler (Eds.), *Supporting service innovation through knowledge management: Practical insights & case studies* (pp. 26-39). Copyright 2009 by the Swiss Knowledge Management Forum.

During the early 1980's there was an employment movement from manufacturing to services. Researchers acknowledged that a need to include services in the study of innovation arose. Originally, there was very little differentiation between service innovation and innovation in manufacturing. The assimilation approach derived from the tendency to apply the same theories and empirical indicators to innovation in manufacturing to that in services (Fischer, n.d.). Within the context of this approach, service innovation thus entailed the adoption of non-endogenous applications that are external to the sector by service organisations. This approach was "linked to supplier-dominated perspectives associated with earlier sectoral taxonomies of technological activities" such as Pavitt's sectoral taxonomy of innovation (Howells, 2010, p. 69). He argued that services are innovation laggards and that any change in this sector could be ascribed to a diffusion of innovations that originated in the manufacturing industry. This conventional perspective of innovation in services is predominantly held by outsiders of the service research circle and is still widely applied to empirical analyses, although its effect has waned over the past few years (Howells).

The demarcation or distinction approach is the direct opposite of the assimilation approach. During the 1990's demarcation enthusiasts proposed that there is a distinction between innovation in services and that of manufacturing. They argued that novel, service-specific theories of innovation should be developed in order to grasp the complexity and dynamics of service innovation due to innovation forms which they considered to be service-specific (Gallouj & Windrum, 2008).

Studies that derived from this approach sought to distance itself from the mere adaptation of manufacturing centred innovation models and endeavoured to focus on the distinctiveness of service innovation and how this may pave the way for new conceptualisations of innovation processes pertaining to service activity. Much thought and attention has been given to the peculiarities of services and the differences between services and archetypal manufacturing by these scholars.

Originally, the studies based on the service-oriented approach examined the business-to-business services offered by knowledge-intensive business services (KIBS) in relation to client-centred service innovation (Howell, 2010). The emphasis of these studies were on the co-production thesis which "suggests that a distinguishing feature of services is the high degree of interaction between the user and the service provider" (Gallouj & Windrum, 2008, p. 143). In collaboration with their clients, KIBS determine the needs, define product design and serve as an interface between service organisations and other stakeholders within the

innovation networks. This stressed the significance of organisational innovation and its association with “product and process innovation, input and market innovations, innovation networks, and the problems that service firms face in protecting their innovations” (Gallouj & Windrum, p. 143). This approach has received much criticism in that, whilst attempting to prove the distinctiveness of innovation in services, the differentiated nature of services with regard to its close knowledge-intensive relations with clients is overemphasised. Whilst this perspective with regard to these specific knowledge-intensive links has been corroborated by comprehensive research (which has contributed considerably towards the understanding of applied innovation) it fails to encompass the repetitive, standardised and low-technology characteristics of numerous service outputs (Howells, 2010).

This led to the emergence of a second distinguishing feature of service innovation which is referred to as ‘ad hoc innovation’. It is defined by Gallouj and Windrum, (2008, p. 143) as “a non-reproducible solution to a client-specific problem”. Thus, it is innovation produced whilst in the process of rendering the service and comprise of offering new solutions to individual customers. Such innovative behaviour is not generic, although the procedural elements, related to individual customers, can be reproduced. Ad hoc innovation has been criticised in that it does not align with the traditional definition of the innovation process, which typically comprises the introduction of novelty and subsequently diffuses across society. Drejer (2004) suggests that diffusion involves replication within a wide variety of diverse settings. This is, however, prohibited by the specificity of ad hoc innovation (Gallouj & Windrum).

Drejer associates ad hoc innovation with cumulative learning, which entails a process of “continuous adaptation to small changes – including coming up with specific solutions to specific problems – and is part of the day-to-day functioning of a business”. On the contrary, Gallouj, Weinstein, and Gallouj hold the view that it is broader than mere learning – “it is innovation characterised by degree of indirect reproducibility” (Gallouj & Windrum, 2008, p. 144).

The last approach is the synthesis or the integrative approach, which is derived from two related views. The first suggests that vast similarities between manufacturing and service sectors already exists, but these similarities are not sufficiently conceptualised and measured and thus remains unexplored. The second approach recognises that the economy has evolved to such an extent that goods and services in both the production and consumption stages are indistinguishable (Howells, 2010). Due to this, a need arose “to develop an integrated conceptual model that is applicable to both services and manufacturing, and which covers all aspects of innovative activity” (Gallouj & Windrum, 2008, p. 144).

Recently, a final approach called the segmentalist service approach, which is not yet widely recognised, emerged. This approach partly refers to the first two approaches, the assimilation and distinction approaches. According to this approach services is too wide a sector and is too heterogeneous. This makes it near to impossible to develop a standard perspective that would be applicable to the entire service sector. In different manufacturing sectors, differentiation in terms of innovation studies is prevalent. Subsequently the question arose why studies of innovation in the significantly larger services sector should deviate from this (Howells, 2010).

Within the frontline service context, 'ad hoc innovation' is the axiom that is considered most relevant and thus the focus of the current research study will be placed thereupon.

#### **2.2.4 Frontline Service Innovation**

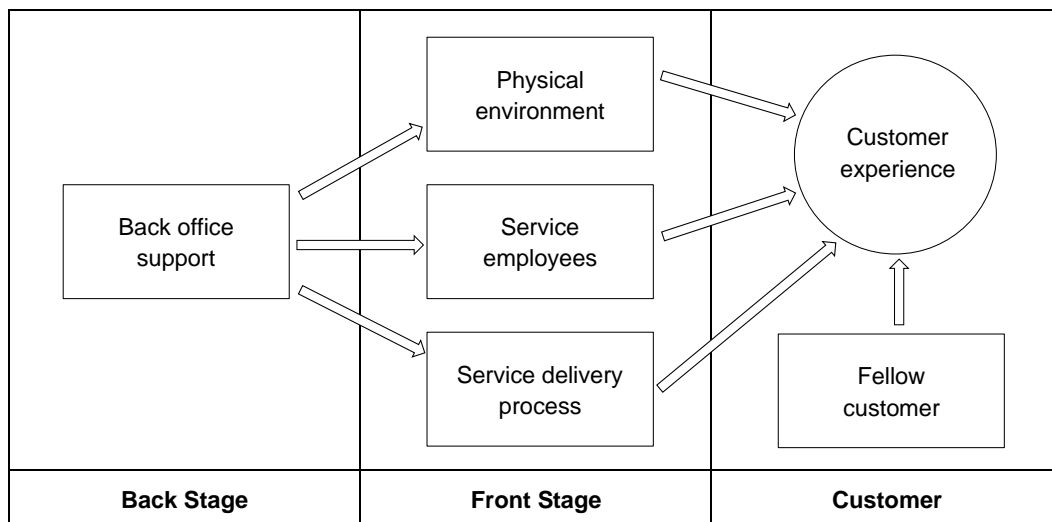
The customer interface presents the employee with an opportunity to either build and strengthen the customer's emotional ties with the organisation or destroy it. Even though employee's interactions are not the only means by which organisations strengthen these emotional ties with customers, they represent a resource which is often untapped in this regard.

However, in most organisations, the lowest paid and least valued employees tend to engage face to face with customers (Flemming & Asplund, 2007). The platform on which a customer's emotional connection is built is twofold. Firstly, their perception is influenced by the practical benefit that derives from a product or service or in other words, the extent to which their needs are fulfilled, and secondly by the service experience.

Bettencourt recommends that service innovation should commence with the realisation that "services are solutions to customer's needs" (Bettencourt, 2010 p. *xxi*). Accordingly, he suggests that, before an organisation can customise its services or generate ideas to address its customer's needs, such needs have to be understood. Yet, contemporary organisations still take a backward approach to service innovation – they tend to generate the idea first. Service innovation is thus an end and not a means to an end. The key characteristic of the Frontline Employee's (FLE's) job is heterogeneity (Slåtten et al., 2011; Sousa & Coelho, 2011), because each customer's needs are unique and their demands diverse. FLE's are often required not only to address the underlying needs, but to find creative means to uncover such needs. It is imperative for the FLE to determine and understand the customer's needs and the

customer's perception of what constitutes satisfactory service, and as such adjust their customer interactions accordingly (Lages & Nigel, 2012).

Voss and Zomerdijk (2007) argue that the customer's experience spans over an extended period – commencing prior to and concluding long after the sales experience or transaction. During this time span the customer's perception of the organisation or the brand is formed, based on his or her experience at numerous touchpoints. Their research confirmed that innovation occurs at each of these touchpoints or distinct design areas and may directly or indirectly influence the customer's experience. Voss and Zomerdijk state that these design areas should be cautiously planned and managed. The five critical design areas according to Voss and Zomerdijk (p. 2) are “the physical environment, the service employees, the service delivery process, fellow customers and back office support” (Figure 2.3). They supply the following examples of innovation within these design areas which include amongst others: Attention to the sensory design of the physical environment, motivating employees to engage with customers, utilising the other customers to contribute to a pleasant experience and linking back office support personnel to the front stage experience.



*Figure 2.3.* Five Experimental Design Areas. Adapted from “Service design for experience-centric services,” by C. Voss & L. Zomerdijk, 2010, *Journal of Service Research*, 13(1), 67-82, p. 79. Copyright 2010 by the *Journal of Service Research*.

Although all five of Voss and Zomerdijk's (2010) design areas are considered extremely important, the service employees make an immense contribution to the organisation's performance in that they “are the service” in service contexts (Cadwallader, Jarvis, Bitner, &



Ostrom, 2010). Thus, in services the individual rendering the service and the service itself are indistinguishable. Service employees can typically be categorised into two groups, namely those who interact with the customers and those who do not have direct contact with the customer but are a link in the service delivery chain. Frontline is an appropriate description for customer-contact employees as they play the most important role in the service delivery chain – they represent the face and voice of the organisation (Slåtten et al., 2011). The FLE tend to be the first and often the only point of contact between the organisation and the customer (Lages & Piercy, 2012). Although the importance of support personnel should not be negated, the FLE, due to customer interaction, holds a “strong position to prevent potential service problems, provide creative solutions when problems occur, and suggest ideas for service improvement” (Lages & Piercy, p. 216).

FLE’s are faced with the constant challenge of how to behave whilst interacting with the customer by offering personalised and customised service that will result in a positive service experience for the customer. Donavan, Brown, and Mowen are of the opinion that “[s]ervice employees, who pay particular attention to reading the needs of the customers through their verbal and nonverbal communication, are particularly helpful for the organi[s]ation and other employees” (Piercy, 2012, p. 217).

Once the FLE has established the customer’s needs, the FLE thus has the opportunity to generate and apply their novel ideas (problem solving) in order to customise and personalise the services rendered. “Consequently, in the process of the customization of the services, there is a potential for the frontline service employees to act in new and innovative ways in order more completely to customi[s]e and personali[s]e the services offered” (Slåtten et al., 2011, p. 271).

In conclusion, the FLE’s job consists of three elements: *i) the FLE’s ability to identify and analyse the customer’s needs or problems; ii) to act according to this acquired knowledge; and iii) to customise services in order to satisfy the customer’s service expectations.* By satisfying the unique needs or problems of the customer, the FLE may ultimately improve the performance of their organisation’s frontline service (Slåtten et al., 2011) and significantly enhance the organisation’s competitive advantage.



## 2.3 INNOVATIVE PROBLEM-SOLVING PHASES

Problem-solving in the frontline service context is ubiquitous. As the FLE is constantly faced with different customers with varying needs, the problems that arise from these interactions would be classified as heuristic problems. Heuristic problems tend to be complex and ill-defined with no single and right solution (Williams, 2004).

Generally, research pertaining to problem-solving implies that it is an activity that involves the application of systematic, disciplined and continuous cognitive effort. Process models are often applied to problem-solving research. These models usually depict problem-solving as a systematic process that consists of several interrelated and sequential stages at either a group or personal level. Based on process model theory, each behavioural stage is a pre-requisite in order to proceed to the next. By means of feedback loops the problem-solver can revisit an earlier stage (Sivakumar, 2006).

In order to set the stage for problem-solving within the customer service context, it is useful to consider the different stages of the process. For the purposes of this research study, the following distinct behavioural stages were identified with regard to customer problem-solving by the FLE: *i) identify and analyse the problem; ii) seek existing solutions; iii) generate new solutions; iv) evaluate feasibility of possible solutions; and v) implement the selected solution.*

### 2.3.1 Stage 1: Identify and Analyse the Problem or Need

The FLE senses that there is a gap or a discrepancy between the customer's current and desired state of needs. People usually are known to communicate their needs (desired outcomes) in functional terms, but often their higher order problem-solving goals are left to the intuition of the FLE (Sivakumar, 2006). Lages and Piercy (2012) refers to such intuition as the ability to read the customer's needs. Donavan, Brown, and Mowen regard it as "an employee's desire to pick up on customer verbal and non-verbal communication" (cited in Lages & Piercy, p. 217). Essentially, FLE's therefore have to "sense" and address both the expressed and latent needs of the customer (Sivakumar).

In order to ascertain the nature and the extent of the problem/need the FLE must gather relevant information. Various sources, formal (databases or customer surveys) and informal (discussions with customers), are to be sought. Samelson (1999) emphasises the importance of consulting the customer, as a valuable source of information, during this step.

Caution to not merely address the symptoms, rather than the root causes of the problem, should be taken. The FLE is more likely to permanently resolve the issue if he/she addresses the root causes. However, this may be a lengthy process and then the FLE must contain the problem in the interim. Such containment may eliminate or limit the customer's loss (Samelson, 1999). Sivakumar (2006, p. 37) is of the opinion that “[s]uccess at this stage requires a working knowledge of what information to gather, how to gather it, and from what sources”.

### **2.3.2 Stage 2: Seek Existing Solutions**

Based on learning theories, humans are inclined to take cognitive shortcuts (heuristics) whilst solving problems and would therefore consult their knowledge of prior behaviours or experiences (cognitive schemas) in order to find existing solutions. Lockton, Harrison, Cain, Stanton, and Jennings (2013, p. 41) suggest that behavioural heuristics generally refer “to simple, frugal ‘rules of thumb’, tacit or explicit, for making decisions and solving problems”. Moreover, they state that “[h]euristics are qualitatively different to other components of behavioural models such as attitudes and habits: instead they characterise the phenomenon of people bounding (sic) or simplifying the problem/solution spaces they experience, framing the situation in terms of a particular perspective, tentative assumption or salient piece of information, rather than undertaking an exhaustive analysis of all possible courses of action”.

However, these habitual ways in which humans associate information – could be the greatest threat to idea generation. The logic of experience deters humans from combining information in unusual ways and consequently, humans refrain from exploring all possible solutions (The road to a solution – generating ideas, n.d.).

### **2.3.3 Stage 3: Generate New Solutions**

Sivakumar (2006, p. 40) defines FLE problem-solving within the context of solution generation, as “a behavio[u]ral orientation of the FLE to effortfully engage in adaptive or innovative activities that facilitate generation of an acceptable solution(s)”. It entails organising and combining the information at hand in different ways in order to create a variety of possible solutions. During this step the emphasis is on the quantity as opposed to the quality of the solutions produced. The FLE should suspend judgement or refrain from evaluating the solutions during this stage as this may limit creativity. The imagination of the individual is hampered in that the mind is inhibited from making conscious or unconscious unusual connections (The road to a solution – generating ideas, n.d.).

Although a wide array of techniques for idea generation exists, it won't be explored for the purposes of this research study.

#### **2.3.4 Stage 4: Evaluate Feasibility of Possible Solutions**

This step is referred to as the solution negotiation step. Sivakumar (2006, p. 40) defines it as the FLE's ability to "engage in actions that facilitate successful negotiation of a mutually acceptable solution(s) to problems". It is a process of decision-making based on the comparison of the potential results of alternative solutions.

During this stage, the FLE generally sets criteria against which the solutions are evaluated. Typical criteria against which the alternative solutions could be evaluated are: "Benefits, costs, timeliness, acceptability, and ethical soundness" (Reheem, 2005, p. 6). Samelson (1999) warns that the FLE's need to maintain a balance between understanding the customer's criteria and adhering to the organisation's criteria for a solution. He opines that the FLE need to challenge the constraints should he or she establish conflict between what appears to be a viable solution and the rules and regulations of the employer. It is however important that the FLE refrain from selecting solutions that violate such constraints.

Unacceptable solutions should thus be eliminated at this stage. The remaining solutions should be weighed against the outcome required and subsequently presented to the customer in order to enable him or her to participate in the aforementioned elimination procedure – this will enhance the customer's ownership and acceptance of the proposed solution (Samelson, 1999). Lastly, prior to implementation, the FLE must assess the risks associated with the selected solution.

#### **2.3.5 Stage 5: Implement Solution**

The FLE's aim should be to "act to implement permanent corrective action" (Samelson, 1999, p. 42). This typically involves three stages: *i) planning and preparing to implement the solution; ii) taking the appropriate action and monitoring its effects; and iii) reviewing the ultimate success of the action.*

An action plan is a sequence of actions that will enable the FLE to achieve the anticipated outcome. The resources and timeframe required is usually also stipulated in such a plan. Once the plan has been put into effect, continuous monitoring against the customer's needs is required (Sivakumar, 2006). The nature of the customer relationship will determine the customer's involvement during this step. At the one end of the continuum, the customer may

participate in or observe the action plan during every step and on the other end (which is not advisable) the FLE may merely inform the customer once the process is complete. Samelson (1999) recommends that the FLE should at least advise the customer of the progress made.

Once the implementation has been completed, it is advisable to measure its success, both to estimate its practicality for solving future problems of the same nature and to ensure that customer's needs have been met. If not, it may be necessary to revisit and adapt the work done at an earlier step in the problem-solving process.

## **2.4 ANTECEDENTS OF MULTI-LEVEL ORGANISATIONAL INNOVATION**

Service innovation is a relatively new and unexplored field of research. Consequently, the research pertaining to the antecedents thereof appears to be extremely limited. Alternatively, an overview of the literature on the antecedents of innovative work behaviour in general, on multiple organisational levels, is presented in the following paragraphs. This overview is not exhaustive but is indicative of the scope of the field. Such information will be used to further the position of the thesis.

### **2.4.1 Individual-Level Antecedents**

Previous research predominantly ascribed individuals' innovative behaviour to individual characteristics and propensities. These included, amongst others, personality factors and cognitive ability (i.e. linguistic aptitude, expressive fluency, convergent and divergent thinking and intelligence). Creativity and innovation scholars have gradually included contextual variables to this individual level of inquiry. Their findings indicate that creativity and innovation is fostered within a setting which offers opportunities, a lack of constraints and rewards (Drazin, Glynn, & Kazanijan, 1999).

A consistent set of critical individual-level antecedents that contributes to the promotion and the implementation of innovation emerged whilst scrutinising the extant body of research. These variables are categorised in clusters that range from enduring on the one end of the continuum to transient on the opposite end.

#### **2.4.1.1 Ability, skills and experience**

Cognition, knowledge, thinking style and emotional intelligence are the typical themes that emerge in the extant literature pertaining to individual-level antecedents of innovation. The following paragraphs provide a brief overview of the literature under each of these themes.

#### **2.4.1.1.1 Cognition**

The relation between intelligence and creativity has been studied for decades, but despite this there is still little agreement on the interplay between these two constructs. Consequently, diverse theories and models emerged which are currently still widely applied. The first scholar active in this discipline is Guilford. In the 1950's he designed a theory called the Structure of Intellect (SI) whereby he postulated that creativity is a mental ability which involves divergent thinking (i.e. multidirectional thinking). Numerous scholars followed Guilford's work and produced evidence that ideational fluency (i.e. quantity of new ideas) constitute divergent thinking. However, critics gathered empirical evidence that suggest the contrary (Patterson, Kerrin, & Gatto-Roissard, 2009).

Gardner argues that intelligence consists of a collection of eight distinct intelligences (as cited in Kim, Cramond, & Vantassel-Baska, 2010). Moreover, he postulates that creativity emerges at the top level of utility of these intelligences. Cattell and Horn did not separate creativity and intelligence, but divided intelligence into crystallized intelligence and fluid intelligence (Kim et al., 2010). Cattell (1971) believed that an individual's creative ability is firstly determined by his or her fluid intelligence and secondly by one's personality. Furnham, Batey, Anand, and Manfield elaborated upon this work and discovered that fluid intelligence has a stronger positive correlation with divergent-thinking fluency than self-rated creativity (Kim et al., 2010).

Renzulli developed a three-ring conception of giftedness which is a set of three interlocking components with giftedness at the interchange (Kim et al., 2010). These components are characterised as creativity, above-average ability (intelligence) and task commitment. In contrast Sternberg and colleagues (Sternberg, 2006) took a confluence approach to the study of creativity and intelligence and one of the most infamous theories that emerged was the investment theory (Kim et al.) of creativity. This theory proposes that creativity consists of six distinct, but interrelated constructs with intelligence as a subset of creativity (Sternberg). Both notions regard creativity to be more relevant with regard to giftedness (Kim et al.).

Numerous researchers within the field are followers of the threshold theory. This theory suggests that above-average intelligence is required for high level creativity. However, once an individual IQ score exceeds 120 the correlation between creativity and intelligence cease to exist. This theory asserts that beyond an IQ level of 120, creativity and intelligence are distinct constructs. Research on this theory, however, is limited and the results are inconclusive (Kim et al., 2010).

Some creativity and innovation scholars argue that anyone who has the desire to acquire the skill of creativity can do so (De Jager, Muller, & Roodt, 2013). Some believe that “training in the field of creative problem-solving is generally found to be most effective when organisations wanted to equip employees with creative and innovative thinking and problem-solving skills” (De Jager et al., p. 2). In their research, De Jager et al. found that creativity and problem-solving techniques can be developed by means of attending a workshop, but on its own it is not considered sufficient to ignite sustained innovation.

In summary the literature on creativity and intelligence lack clarity since intelligence is often regarded a unitary concept. Earlier theories of cognition placed an over-emphasis on cognitive ability and negated the importance of knowledge-based intelligence (acquired skill) (Patterson et al., 2009).

#### **2.4.1.1.2 Knowledge**

Most researchers regard knowledge as a main variable in both creativity and innovation. The literature proposes that engagement in domain-specific knowledge is a pre-requisite for innovation, but that an extended level of expertise within a given domain, may pose a barrier to innovation within the parameters of that discipline. Accordingly, it is suggested that a balance between knowledge and innovation (i.e. too much or too little knowledge may inhibit innovation) is ideal (Patterson et al., 2009).

Domain-specific knowledge is an indication as to how much an individual knows about a given discipline. This area does not necessarily have to be complex and it can be rather broad (Patterson et al., 2009). The literature suggests that one can develop creative and innovative abilities based on the quality and quantity of problem-solving exposure within a given area of expertise. Moreover, the literature concurs that expertise is ascribed to experience, especially on deliberate practice, as opposed to any innate abilities or intelligence-related constructs (Björklund & Eloranta, n.d.). Accordingly, one can deduce that demographic variables such as education and work experience can predict one’s innovative behaviour at work. Several studies claim that education and exposure may reflect task domain knowledge which can be ascribed to formal training and job-related experience (Hammond, Neff, Farr, Schwall, & Zhao, 2011).

#### **2.4.1.1.3 Thinking style**

Researchers have taken different approaches to postulate the link between creativity or innovation and thinking styles. Kirton devised a measure, the Kirton Adaption-Innovation Inventory (KAI), which plots an individual on a continuum referred to as an adaptation-innovation continuum (King & Anderson, 2002). This measure does not distinguish between levels of creativity, but rather different styles of creativity. Accordingly, the adaptor demonstrates creativity by making adjustments within the prevailing paradigm, whilst the innovator demonstrates creativity by breaking free from the prevailing paradigm.

Jabri (1988) developed a measure based on Koestler's book, *The Act of Creation* (1964) wherein he identified two types of thinking. 'Associative thinking' refers to habit and set routines, whereas 'bisociate thinking' takes place when two 'matrices' of thought are integrated and manifest in a creative thought or act. Scott and Bruce (1995) also developed an instrument referred to as the General Decision-Making Style (GDMS) instrument. They postulated four decision-making styles – rational, intuitive, dependent and avoidant. An additional style known as spontaneous emerged during their research. The results showed that individuals who apply the rational style are less likely to be innovative (Payne, Lane, & Jabri, 1990).

In a study conducted by Ettlé, Groves, Vance, and Hess (2014) they found further evidence for the notion that balanced linear/nonlinear thinking style is associated with innovative behaviours. Linear thinking is defined as a more conventional cognitive pattern, which involves a logical, rational and an analytical approach to decision-making. Non-linear thinking is considered a complementary thinking style to linear thinking and consists primarily of the dimensions of intuition, creativity, and emotions.

Accordingly, it seems that the theories and research on thinking style and innovation is rather diverse. Based on all the different measures it is apparent that the more traditional and rational styles have a negative connection with creativity and innovation.

#### **2.4.1.1.4 Emotional intelligence**

Emotional intelligence is a construct which gained a lot of popularity over the past few years (Patterson et al., 2009). In a study conducted by Dincer and Orhan (2012) they demonstrated that there is a positive correlation between emotional intelligence and innovative work behaviours within the Turkish banking sector. Likewise, Suliman and Al-Shaikh (2007) also found that emotional intelligence is considered a key part in promoting creativity and



innovation within an organisation. Other studies displayed that emotional intelligence in the leader may lead to follower creativity and innovativeness (Castro, Gomes, & De Sousa, 2012; Al-Omari & Hung, 2012). Hypothetically emotional intelligence could possibly be essential for innovation but remains a rather untapped topic within this context (Patterson et al.). Emotional intelligence may be critical during the first phase of innovative problem-solving where the individual or FLE is required to identify and interpret the customer's problem or need.

#### **2.4.1.2 Personality**

Based on years of research on the relationship between personality and innovation, a consistent collection of characteristics has surfaced. Ahmed (1998, p. 35) propose that these characteristics include "high valuation of aesthetic qualities in experience, broad interests, attraction to complexity, high energy, independence of judgement, intuition, self-confidence, ability to accommodate opposites, persistence, curiosity, and energy". The Five Factor Model (FFM) of personality, a universal taxonomy of personality characteristics, is predominantly applied when the relationship between personality and other variables are studied (Liao & Chuang, 2004; Yesil & Sozbilir, 2013; Patterson et al., 2009). Patterson et al. believe that this model is useful when categorising the literature on the relation between innovation and personality.

##### **2.4.1.2.1 Openness to experience**

Patterson et al. (2009) claim that openness to experience is the most prominent personality dimension to predict the manifestation of innovation and noted that strong empirical evidence of a positive link between the characteristics used to portray openness and various characteristics of innovation exists. McCrea (1987) and King, McKee Walker, and Broyles (1996) demonstrated that amongst the five dimensions of the FFM, openness to experience has the highest correlation with creativity.

##### **2.4.1.2.2 Agreeableness**

Numerous studies support the notion that there is a negative association between innovation and agreeableness (Bakx, 2007; Patterson, 2009). Thus, King et al. (1996) suggest that conformity may manifest as a result of agreeableness, whilst innovation demands independence of thought and autonomy. Eysenck (1993) alludes to the potentially adverse characteristics of innovators (e.g. outspoken, uninhibited, quarrelsome, and even asocial at times). Recent findings demonstrate that agreeableness is negatively related to idea implementation, but not necessarily with idea generation (Patterson et al., 2009).



#### **2.4.1.2.3 Conscientiousness**

According to King et al. (1996) the relationship between conscientiousness and innovation is interactive. He argues that a high level of conscientiousness is required for creative production as this requires self-discipline, diligence and a strong sense of direction (goal-oriented behaviour). Conversely, high conscientiousness may also be characterised as resistance to change and compliance with rules and the status quo and the need to achieve predetermined objectives. These characteristics may result in a negative association with innovation (Patterson, 2002; George & Zhou, 2001). King et al. hypothesised that there is a positive relationship between conscientiousness and innovation, but the results rejected this hypothesis. Patterson et al. (2009) concluded that most traits that are related with conscientiousness are unrelated to innovation (i.e. a lack of conscientiousness is related to innovation).

#### **2.4.1.2.4 Extraversion**

The evidence pertaining to the relationship between extraversion and innovation seems rather contradictory. Generally, it is assumed by many that isolation and withdrawal are key requirements for ideation (Patterson et al., 2009). In their review of the literature, Patterson et al. state that recent studies revealed contradicting findings which suggest that extraversion is a positive predictor of innovation. In previous research Costa and McCrae referred to extraverted individuals as active and passionate and Barron and Harrington claim that such individuals have high energy and self-confidence (as cited in King et al., 1996). Various scholars describe innovative individuals as people who derive pleasure in creating, are highly energetic and tend to fantasise. Subsequently, one would infer that a high level of extraversion is positively associated to a high level of innovation (Patterson, 2002).

#### **2.4.1.2.5 Neuroticism**

The extant research on the relation between neuroticism and innovation is limited (Patterson, 2009). The little available research (Patterson, 2002; King et al., 1996) is also characterised by inconsistencies. An explanation for such inconsistencies may be that the correlation between neuroticism and innovation is context-dependent (i.e. turbulent environment which requires innovation for survival). Others propose that a curvilinear relationship between neuroticism and performance (either too little or too much anxiety has a negative effect on innovation) exists. Thus, moderate levels of anxiety are supposedly conducive towards innovative performance (Patterson).

### **2.4.1.3 Psychological states**

Although the research on the influence of psychological conditions on innovative behaviours is limited, Carmeli and Spreitzer (2009) suggest that psychological conditions play an important enabling role in innovative behaviours.

Khan's (1990) psychological conditions (i.e. psychological safety, psychological meaningfulness and psychological availability) and their relationships with innovation are predominantly researched in combination, although psychological safety is frequently studied in isolation. Vinarski-Peretz and Carmeli (2011) claim that Khan's psychological conditions are imperative to encourage employees to engage in innovative behaviours. They investigated the link between care felt and innovative work behaviours with the psychological conditions as mediators. The results indicated that care felt was positively related to psychological conditions and the latter was either directly or indirectly (via motivation) linked to engagement in innovative work behaviours. Moreover, Arora and Kamalanabhan (n.d.) propose that supervisor and co-worker support have a critical influence on psychological conditions which in turn create motivation that leads to innovative behaviour in the workplace. Thus, they imply that employees who are supported by their respective supervisors and co-workers engage more readily in innovative behaviour.

#### **2.4.1.3.1 Psychological safety**

Khan (1990, p. 705) described psychological safety as a "sense of being able to show and employ self without fear of negative consequences to self-image, status or career". One therefore has a general feeling that situations (predominantly of a social nature) are trustworthy and safe, with a certain degree of predictability in terms of behavioural consequences.

Ling Bin proposes that psychological safety is a multi-hierarchy construct and manifests on individual, group and organisational level. Research on psychological safety shows an interactive relationship between psychological safety and innovation. On the individual level, psychological safety has a positive influence on creativity, but as innovation and change increase, psychological safety at the organisational level may decrease (as cited in Chen, Gao, Zheng, & Ran, 2015). Apart from this research, little empirical evidence on the relationship between psychological safety and innovation was found.

#### **2.4.1.3.2 Psychological availability**

Psychological availability is defined by Khan (1990, p. 705) as a “sense of possessing the physical, emotional, and psychological resources necessary for investing self in role performances”. Accordingly, an individual thus feels that he or she has the physical, intellectual and emotional capacity to invest in their role performance.

Apart from the research conducted on the influence of psychological availability (as part of Khan’s psychological conditions trio, as mentioned above) and innovation, no other relevant research is currently available. However, Binyamin and Carmeli (2010) investigated the mediating role of psychological availability in the correlation between human resource management processes and employee creativity. They found that by structuring human resource processes, an environment with low levels of perceived uncertainty and stress is cultivated. Such an environment is conducive for a sense of psychological availability which in turn has a positive impact on employee creativity.

#### **2.4.1.3.3 Psychological empowerment**

Psychological empowerment is defined as a combination of motivational cognitions that are developed by a work environment and are demonstrated by an individual’s active orientation towards his or her work role (Spreitzer, 1995). This involves an individual’s feelings towards his or her workplace and consists of four factors; meaning, competence, impact and choice. (Wang & Lee, 2009).

Very little research on psychological meaning and innovation seems to exist. Meaning is often discussed, together with competence, self-determination and impact as one of the cognitions in a construct referred to as psychological empowerment, when its correlation with innovation is investigated (Rahman, Panatik, & Alias, 2014). In a study conducted by Ford and Randolph they determined that the successful application of empowerment was crucial for new product performance and innovation (Ertürk, 2012). Moreover, Pieterse, van Knippenberg, Schippers, and Stam (2010) provided empirical evidence that psychological empowerment plays a moderating role in the relationship between transformational leadership and innovative behaviour. Likewise, Jung, Chow, and Wu (2003) also found that empowerment is positively related to support for innovation but revealed that there is a negative relationship between empowerment and organisational innovation. The reason for this unexpected finding was predominantly ascribed to the cultural context within which this study was conducted. The participating organisations were situated in Taiwan where power distance is a key cultural

value. Within these cultures employees generally prefer managers to take a stronger lead and as such may feel confused if they don't receive the necessary guidance during the innovation process.

#### **2.4.1.3.4 Psychological ownership**

Psychological ownership is defined as a mindset that leads to possessive feelings of ownership towards a specific target. These targets could range from tangible objects such as tools to more intangible aspect such as tasks, an organisation or even an idea (Avey, Avolio, Crosley, & Luthans, 2009).

Psychological ownership is a fairly new concept and it is thus expected that the extant research on the psychological ownership and innovation association is extremely limited. The closest to the mentioned relationship is a recent study conducted by Bubbenzer, Rouse, and Gregoire (2015). They investigated the degree of 'attachment' of individuals, who are not necessarily involved in the idea generation phase, but rather during another phase in the innovation process, to the initial idea. Their study was grounded upon an integration of psychological ownership and social identity theories. Given the limited available research, further investigation with regard to the psychological ownership and innovation correlation is warranted.

#### **2.4.1.4 Motivation**

Theorists and researchers widely acknowledge the relationship between intrinsic motivation and creativity. These include amongst others Amabile's componential model and Sternberg and Lubart's investment theory and Woodman and Schoenfeldt's interactionist model of creative behaviour. Runco and Chand also support the notion that intrinsic motivation is a critical element of the creative process, although they believe its role to be inferior to that of cognitive processes (Collins & Amabile, 1999). In addition, the research suggests that intrinsic motivation might be an important mediator between variables such as leadership (Zhang & Bartol, 2010; Shin & Zhou, 2003), organisational culture and climate, personality (Unsworth, Brown, & McGuire, 2000), job design (Slåtten & Mehmetoglu, 2011) and creative performance.

Whilst it seems clear that intrinsic motivation is a cornerstone for innovation, the role of extrinsic motivation is less obvious. Amabile (1997), claims that intrinsic motivation is central to activities that require novelty. She predicts that extrinsic motivators may distract the individual during the initial phases of the innovation process. Accordingly, she suggests that later, when endurance and appraisal of ideas are required, synergistic extrinsic motivators

may encourage the individual to persist in solving a domain-specific problem. Sauermann and Cohen examined the effect of individual motivation on organisational innovation and performance (Patterson et al., 2009). Based on their findings both intrinsic and extrinsic motivation impacted the individual effort and the quality of the innovations. The study did however conclude that extrinsic motivators (e.g. monetary rewards) did not play as an important role as specific aspects of intrinsic motivation (e.g. need for intellectual change) in promoting innovation (Patterson et al.).

#### **2.4.1.5 Emotional states**

According to Kaufmann the research on affect and creativity focused predominantly on the effect of positive and negative mood, as opposed to a neutral state, in a wide array of creative task performances (Russ, 1993, 1999). Frese (2010) claims that most of the studies in this domain found a positive relationship between positive mood states and creativity with only a few that demonstrated a positive relationship between negative moods and creativity.

A recent study conducted by Fong, demonstrated the complexity of this topic in that it revealed that emotional ambivalence (i.e. the concurrent experience of positive and negative moods) had a positive correlation with creativity. What is more alarming than the inconclusiveness of the research on the association between affect and creativity is the absence of current research on the effect of affect-related variables and innovation (Frese). Patterson et al. (2009) are of the opinion that further research on this topic is warranted.

Emotional labour is a relatively new construct that is usually associated with service jobs. It is considered a form of impression management in that the employee attempts to direct certain behaviour towards others in order to create specific social perceptions of him or herself within a given interpersonal climate (Ashforth & Humphrey, 1993). Although no sufficient empirical evidence with regard to the effect of emotional labour on innovation exists, other studies tend to show that emotional labour leads to employee burnout, depersonalisation, job dissatisfaction, anxiety, psychosomatic health problems and intentions to quit one's job (Brotheridge & Grandey, 2002; Grandey, 2000; Montgomery, Panagopolou, & Benos, 2005; Montgomery, Panagopolou, De Wildt, & Meenks, 2006). Accordingly, it can be inferred that emotional labour would most probably have a negative effect on innovation.

#### **2.4.2 Concluding Remarks: Individual-Level Antecedents**

The literature in general proposes a myriad of individual-level antecedents of creativity and innovation. However, within the FLE's work context the current researcher only selected those

individual-level antecedents which she believes would contribute the most towards innovative frontline service behaviour. These include: Psychological ownership, psychological safety, creative self-efficacy and emotional intelligence.

#### **2.4.2.1 Psychological ownership**

Ownership, albeit of a legal or psychological nature is apparent across all human societies. Developmental psychologists believe that psychological ownership is an innate motive of being in control of objects, which already emerges during early childhood (Pierce, Kostova, & Dirks, 2003). Whilst the general assumption would be that ownership involves person-object relations, the feeling can also be directed towards intangible aspects such as ideas, words and other people (Pierce et al.).

Within the organisational context some scholars believe that psychological ownership may share the same conceptual space as other constructs, such as organisational commitment, organisational identification and job involvement (Sieger, Zellweger, & Aquino, 2013). In an analysis of the construct of psychological ownership, Pierce et al. (2003) noted that psychological ownership comprises of several distinguishing features. According to Wilpert a sense of possession directed at a specific target, lies at the conceptual core of psychological ownership (Pierce et al.). Within the psychological ownership literature, the term “target” is rather broad and refers to anything (tangible or intangible) to which the individual or even group are attached (Avey et al., 2009). In layman’s terms psychological ownership refers to the extent to which the individual feels that an object (material or immaterial in nature) belongs to him or her. Secondly, psychological ownership involves the degree to which the individual associates the self with the object. This notion is rooted in the premise that possessions may become established as part of the extended self (Sieger et al.). In 2001 Pierce et al. developed the opinion that formal ownership is not required for related behaviour to emerge (Sieger et al.). Thirdly, the state of psychological ownership is twofold and consists of a cognitive and an affective component. One is thus, by means of intellectual perception, aware of the condition which is reflected in one’s thoughts and beliefs regarding the respective target. This cognitive state is coupled with an affective state as a sense of ownership typically tends to produce feelings of euphoria (Pierce et al.).

Various dimensions and measures for psychological ownership emerged over the past decade. Pierce et al. (2003), believed psychological ownership to comprise of three dimensions (i.e. self-efficacy, self-identity and belongingness). Avey et al. (2009) built upon the research of Pierce et al. and added two additional dimensions, territoriality and

accountability, to the construct of psychological ownership. Moreover, they categorised the five dimensions of psychological ownership under either prevention or promotion oriented.

To elaborate upon the research of Pierce et al. and Avey et al., Olckers (2013) added two additional dimensions (i.e. responsibility and autonomy), but only found empirical support for the dimensions of self-identity, responsibility, territoriality and autonomy.

All consumers can confess of multiple times where they have fallen victim to buck passing. More often than not the consumer is passed up an organisation's hierarchical ladder just to learn that the succeeding employee either does not have the authority or the competence to solve his or her problem. The consumer is left frustrated and management finds that they are taking care of customers' needs instead of managing their workforce, because their employees do not take psychological ownership of their task description.

#### **2.4.2.2 Psychological safety**

Maslow was the first to refer to the concept of safety when he developed the hierarchy of needs. He described the hierarchical tier of personal safety as a feeling of confidence and freedom, detached from fear and anxiety (Chen et al., 2015). Edmondson believes that psychological safety refers to the perceptions of the consequences of interpersonal risk-taking within a certain context (Edmondson & Lei, 2014). Thus, an individual who feels psychologically safe is willing to apply him or herself without fear of dire consequences to his or her self-image, career and status. Within the work context, psychological safety refers to an employee's belief as to how others will respond to his or her actions (e.g. asking a question, reporting a problem, putting forth new ideas and making suggestions) (Kark & Carmeli, 2009). Edmondson (2003), suggests that psychological safety entails a cognitive process during which the employee evaluates the potential interpersonal risk that might accompany his or her behaviour within an interpersonal, organisational or work group climate. Accordingly, an employee will therefore refrain from acting if they detect a potential threat (i.e. critique, judgement or embarrassment) (Kark & Carmeli). Thus, employees who feel psychologically safe are more inclined to engage in information and knowledge sharing, make suggestions towards organisational improvements, initiate new products, processes or services and are more willing to learn. Based on decades of research a central theme on psychological safety, which suggest that psychological safety promotes the willingness to share ideas and to act thereupon, emerged (Edmondson & Lei).



Psychological safety is deeply rooted in organisational change and development theory. Schein and Bennis suggested that psychological safety enhances individuals' feeling of security and capacity to change (Edmondson, 1999).

At a later stage, Schein opined that psychological safety suppresses the individual's defensiveness or anxiety when they are presented with information which is contradictory to their frame of reference (e.g. existing knowledge, expectations and hope) (Edmondson & Lei, 2014). In other words, an individual with a strong sense of psychological safety is inclined to conquer their anxiety brought about by uncertainty and utilise the new input more effectively (Kark & Carmeli, 2009).

#### **2.4.2.3 Creative self-efficacy**

Various research studies (Axtell, Holman, Unsworth, Wall, Waterson, & Harrington, 2000; Carmeli & Schaubroeck, 2007; Frese, Teng, & Wijnen, 1999) have revealed a positive correlation between both creative and job self-efficacy and creative and innovative outcomes (Hammond et al., 2011).

Bandura believes that self-efficacy is often portrayed as a variable that affects an individual's motivation to engage in specific behaviours (Hammond et al., 2011). Individuals arrive at a personal efficacy judgement by engaging in a cognitive evaluation process. During this process they assess their personal and contextual resources and obstructions and form interpretations based on such assessments (Tierney & Farmer, 2002). Self-efficacy scholars distinguish between job self-efficacy and creative self-efficacy. Accordingly job self-efficacy refers to one's beliefs about his or her competence with regard to task performance across multiple domains, whereas creative self-efficacy is creativity-specific and refers to one's beliefs about his or her competence with regard to creative performance (Tierney & Farmer; Hammond et al.). Previous research has indicated that elevated self-efficacy could lead to cognitive dimensions (i.e. broad information searches, greater memory recall and sustaining of effort) which are positively associated with creative performance. However, Amabile proposed that creativity involved the "ability to break mental set, a knowledge of heuristics for generating novel ideas, and confidence in adopting nonconforming perspectives, taking risks, and acting without dependence on social approval" (Tierney & Farmer, p. 1140). These factors are all specifically related to creative performance and are generally not known for its connection to self-efficacy.

The concept of creative self-efficacy was introduced by Tierney and Farmer who demonstrated a positive correlation between this construct and creative performance (Hammond et al.,



2011). In their study they investigated two personal antecedents of creative efficacy, job knowledge and job self-efficacy, and two contextual antecedents, supervisor behaviour and job complexity.

Their results yielded that creative self-efficacy accounted for a high degree of variance in creative performance in white-collar workers, but not necessarily for blue-collar workers. Accordingly, the work context has relevance when creativity antecedents and their link to creative performance are delineated (Tierney & Farmer, 2002).

#### **2.4.2.4 Emotional intelligence**

Mayer and Salovey were the first to refer to the term “emotional intelligence” (Dincer & Orhan, 2012). They defined it as the ability to accurately monitor one’s own, as well as the emotions of others, to differentiate between them and to apply such information to direct one’s thinking and behaviour (Dincer & Orhan; Ezzatabadi, Bahrami, Hadizadeh, Arab, Nasiri, Amiresmaili, & Tehrani, 2012). Similarly, Davies, Stankov, and Roberts portray emotional intelligence as a four sub-dimensional construct, which consists of: “*a) appraisal and expression of emotion in the self, b) appraisal and recognition of emotion in others, c) regulation of emotion in the self, and d) use of emotion to facilitate performance*” (Lee & Sou, 2013, p. 20). Thus, “the emotionally intelligent individual remains aware of his or her emotions and manages those emotions in the moment to respond appropriately and productively to events and situations” (Gardenswartz, Cherbosque, & Rowe, 2010, p. 75).

Numerous emotional intelligence studies have demonstrated the benefits of emotional intelligence in the workplace. Goleman suggests that research findings have shown that employees with a high level of emotional intelligence tend to display greater organisational commitment, collaboration and creativity as opposed to those with a lower level of emotional intelligence (Aeeun, 2016). Moreover, Sunil and Rooprai (2009, p. 2) consider emotional intelligence to play a significant role in the following organisational factors: “[O]rganisational change; leadership; management performance; perceiving occupational stress; and life satisfaction”. However, the research on the effect of emotional intelligence on Frontline Service Innovation (FLSI) seems scant.

Emotional intelligence is essential within the frontline context as it enables the FLE to build rapport with existing and potential customers. A FLE with well-developed emotional intelligence tend to empathise and stay emotionally present in order to fine tune their understanding of the customer’s emotional needs during interaction. Numerous scholars

concur that the quality of the interaction at the customer interface is closely tied to the employees' level of emotional intelligence (Boxer & Rekettye, 2011).

By establishing a relationship with the customer, the FLE can, by means of discussion and emotional cues, elicit more information and better understand the customer's expressed, as well as his or her latent needs. This will ultimately enable the FLE to present the customer with solutions that will best fit such needs.

### **2.4.3 Group-Level Antecedents**

Within an organisational setting, individuals do not tend to innovate alone. Most new products, processes and services may at some point in time affect others within this context (De Jong, 2007). This body of research is much smaller in comparison to the research conducted on individual and organisational levels of analysis. According to De Jong (2007) this is an unfortunate shortfall regarding innovation research, given the rise of teamwork within organisations. Group level factors that typically emerged from the body of research are factors related to group composition, development and climate which will be elaborated upon in the paragraphs to follow.

#### **2.4.3.1 Group diversity**

It is believed that groups that consist of individuals with a wide array of backgrounds and views are bound to consider a broader spectrum of approaches to tasks (Patterson et al., 2009). Two types of diversity have been identified in this context: Job-relevant diversity and background diversity. Job-related diversity refers to the heterogeneity in teams with regard to job-role, profession, education, knowledge, skill, tenure or experience. Background diversity, on the other hand, refers to non-job-related aspects such as gender, age and ethnicity (Hülshager, Salgado, & Anderson, 2009). Research demonstrates that both types of group diversity may have a positive and a negative effect on team functioning. Diverse opinions constitute a large pool of information from which ideas can be drawn and integrated in order to provide solutions to work-related problems which will ultimately lead to innovative work performance. In contrast, the detrimental effects of diversity include communication deficits, conflict, staff turnover and subsequently reduced team effectiveness (Van der Vegt & Janssen, 2003).

### **2.4.3.2 Group size**

Stewart believes that the difficulty of the task and the complexity and uncertainty of the environment will determine an effective team size (Hülshager et al., 2009). Complex problems can only be solved if a team contains enough skill variety, resources, expertise and knowledge. Innovation (i.e. ideation and implementation of ideas) is considered a complex task as opposed to a mundane, predictive and methodical task.

The brainstorming literature suggests that both the quantity and the quality of ideas increase in relation to the group size (Hülshager et al., 2009). In their research regarding team-level predictors of innovation at work, Hülshager et al. found a positive linkage between team size and innovation.

### **2.4.3.3 Group structure**

King and Anderson distinguish between two group structures: Mechanistic and organic group structures. Within a mechanistic group structure work tasks are typically broken down and divided amongst members for independent completion. These structures are often bureaucratic, hierarchical and rather formal in its operations. In contrast, organic group structures tend to offer more freedom with regard to responsibilities, reduced or limited management control and a greater inclination to complete work tasks collaboratively. Organic group structures have a tendency to be more innovative as work-group autonomy reigns within this context. However, it has been proposed that the different stages of innovation require different group structures. An organic group structure is considered essential for idea generation and a mechanistic structure is often associated with idea coordination and implementation (Patterson et al., 2009).

### **2.4.3.4 Group development**

The limited available research on the association between group longevity and innovation provides mixed results (Paulus, Dzindolet, & Kohn, 2012). Logically, one would think that a team's innovativeness decreases over time as they fall victim to groupthink, become more homogenous and resistant to change (Patterson et al., 2009). Hülshager et al. (2009) found that longevity had no effect on innovation. On the contrary, laboratory brainstorming research established that gradual group turnover led to increased creativity (Paulus et al.).

#### **2.4.3.5 Group or team climate**

West and Anderson (1998) designed a team climate for work group innovation model that consists of four related factors. Patterson et al. (2009) confirmed that there is valuable evidence that support the presence of these four factors in group climate. These factors include *a) Participative safety*. Within a group context the possibility exists that someone may reject another's ideas. Unless members of a team feel that other members are receptive and supportive to their ideas (Paulus et al., 2012) they won't have the confidence to promote their ideas and problem solutions. This term is closely related to psychological safety which, within a group context is defined by Edmondson as "a shared belief held by members of a team of interpersonal risk-taking" (Patterson et al., p. 18). *b) Vision*. Anderson and West argue that a team with well-defined, shared, attainable and valued objectives and goals tend to steer their innovative efforts in the same direction. *c) Support for innovation*. Support for innovation are typically articulated and enacted. Policies, personnel documents and messages conveyed by word of mouth resemble articulated support. Enacted support, as opposed to articulated support, appears to be more effective with regard to group innovation. *d) Task orientation*. Task orientation is typified by shared group commitment to achieve predetermined task-related performance standards through the implementation of constructive progress monitoring procedures (Anderson & West).

#### **2.4.3.6 Group conflict**

There is usually a negative connotation to conflict, and it is suggested to hamper team performance and decrease job satisfaction as it creates tension, antagonism and distracts team members from the task at hand (De Dreu & Weingart, 2003). Within the workplace it is thus often believed that conflict is counterproductive, but many innovation scholars have argued that in order to stimulate creativity, it is crucial for group members to exchange conflicting perspectives (Paulus et al., 2012). However, innovation researchers differentiated between task and relationship conflict (Hülshager et al., 2009).

Task conflict refers to conflict that is rooted in the content of the task at hand. According to Hülshager (2009) this type of conflict is conducive to group innovation as it encourages information exchange, consideration of others' opinions, reassessment of the status quo and scrutiny of the current task. Conversely, task conflict has the potential to stimulate idea generation, implementation and could thus lead to improved problem solving (Hülshager).

Jehn argues that relationship conflict tends to derive from interpersonal disagreements and is of a social-emotional nature (Hülshager et al., 2009). Such conflict includes differences about personal preferences, political views, values and interpersonal conduct (De Dreu & Weingart, 2003). Unlike task conflict, relationship conflict leads to detrimental psychological reactions such as stress, fear, anger and frustration. Under these circumstances, conflict tends to impede information processing, communication and increases rigid thinking and subsequently reduces receptiveness to others' perspectives (Hülshager et al., 2009). Consequently, divergent relationships between task and relationship conflict with innovation are expected.

#### **2.4.3.7 Group cohesion**

Cohesion is the most widely studied group construct (Hülshager et al., 2009). The literature poses different conceptualisations of this construct. Some view it as a unitary construct with reference to the strength of the social bond between group members. Others define it as a multidimensional construct wherein interpersonal attraction consists of task commitment and group pride. Scholars in this field propose that groups with strong social bonds, shared task commitment and pride in their group membership are expected to be more motivated as opposed to groups without such qualities (Paulus et al., 2012). Hülshager et al. found empirical evidence for the notion.

Paulus warn that cohesive groups are not inherently creative. It is implied that divergent thinking causes conflict and thus such processes are avoided in order to maintain cohesion. Group cohesion could thus either influence innovation positively or negatively. If a cohesive group have as strong commitment towards innovation, group cohesion is expected to be positively associated with creativity. In contrast, if positive interpersonal relations are extremely important to the group, then group cohesion may have a detrimental impact on innovation (Paulus et al., 2012).

#### **2.4.3.8 Group communication**

Former studies have revealed that increased levels of communication relate to improved performance and organisational innovation (Monge, Cozzens, & Contractor, 1992). It is contended that communication is the means by which ideas and information are shared amongst group members and is thus conducive to innovative behaviour (Hülshager et al., 2009).

Moreover, group communication is crucial for both idea generation and implementation. With specific reference to complex problems, group members should engage in regular high-quality

communication as this makes provision for for increased knowledge sharing and the exchange of ideas which ultimately promotes ideation. During the execution phase, communication is considered to underpin important implementation processes, such as mutual monitoring, intra-group member assistance and constructive feedback (Hülshager et al., 2009).

#### **2.4.4 Concluding Remarks: Group-Level Antecedents**

Although the FLE's service delivery is to a certain extent dependent on his or her fellow frontline staff, as well as the back office support staff, it will not form part of the research focus of the current study as it is not regarded as of primary importance for innovative performance on the frontline.

#### **2.4.5 Organisational-Level Antecedents**

The organisational level of analysis considers not only factors grounded in management literature, such as organisational size, age and structure, but also sociological and anthropological aspects. Like individual-level antecedents, organisational-level antecedents have been covered broadly in previous innovative research work. Examples, such as leadership, organisational culture and climate, structure and size, resources, rewards and incentives, and organisational strategy will be discussed in further depth.

##### **2.4.5.1 Leadership**

Some scholars regard leadership as the most influential predictor of innovation within organisations and multiple studies show that effective leadership is imperative for successful innovations (Swart, 2013). Yukl believes that leaders generally tend to have a strong influence on employees' work behaviours, which also include innovative behaviour (De Jong & Den Hartog, 2007). The literature postulates two main ways in which leaders may affect innovation. Firstly, leaders create conditions favourable to innovation, thus playing an enabling role to enhance innovative behaviour (Yukl, 2010). Generally, this involves growing a culture of innovation and not merely hiring a few creative outliers (Horth & Buchner, 2014). Secondly, leaders implement an innovation strategy by managing the individual or team goals which define the expectations for innovative performance (Ali & Ibrahim, 2014).

Many researchers postulate that leaders' behaviours have an enabling effect on the innovation process. As from the 1980's a few independent studies suggested several leadership behaviours that influence an employee's innovative capacity. Behaviours such as "risk-taking, an open style of communication, participative and collaborative style, giving autonomy and

freedom, support for innovation (verbal and enacted) and constructive feedback” were identified (Patterson et al., 2009, p. 19). In their review, Den Hartog and De Jong compiled an inventory of thirteen leadership behaviours which may affect employee innovation. The inventory includes behaviours such as: “a) *innovative role-modelling*; b) *intellectual stimulation*; c) *stimulating knowledge diffusion*; d) *providing vision*; e) *consulting*; f) *delegating*; g) *support for innovation*; h) *organi[s]ing feedback*; i) *recogni[s]ing*; j) *rewarding*; k) *providing resources*; l) *monitoring*; m) *task assignment*” (De Jong, 2004, p. 9).

A leader’s technical and creative problem-solving skills appear to be rather essential enablers of innovation. Based on empirical evidence both technical expertise and creative problem-solving skills are requirements for directing creative individuals or teams as it sets the platform for structuring an inherently vague activity and gives credibility to the leader that will allow him or her to exercise influence (Mumford, Scott, Gaddis, & Strange, 2002). Tierney, Farmer, and Graen (1999) researched leader’s creative problem-solving skills and discovered that these skills were associated with the creative performance of the team members. In a qualitative study conducted by Mouly and Sankaran (1999) within a research and development laboratory context, they established that creative capacity and technical skills were essential for a leader’s successful performance. Similarly, Patterson et al. (2009, p. 19) claim that “cognitive ability, such as intelligence, adaptive problem-solving skills, planning ability (operationalised as the ability to identify, anticipate problems and solutions) are important in leading innovations”. In addition, other researchers speculate that emotional intelligence is a key variable in the leadership-innovation equation as it may affect the leader’s ability to effectively give and receive feedback (Patterson et al.).

Numerous leadership styles have been associated with multilevel innovation and include participative leadership (Krause, Gerbert, & Kearney, 2007), empowering leadership (Slåtten et al., 2011) ambidextrous leadership (Rosing, Frese, & Bausch, 2011), strategic leadership (Jansen, Vera, & Crossan, 2009), authentic leadership (Černe, Jaklič, & Škerlavaj, 2013) and rotating leadership (Swart, 2013) amongst others. Based on a review of the literature, Panuwatwanich, Stewart, and Mohamed (2007) identified four leadership styles that are most relevant with regard to innovation and creativity in organisations. These are transformational leadership, change-oriented leadership, innovation championing and leader-member exchange. They subsequently synthesised the aforementioned styles into a four-factor model which characterised innovation-conducive leaders. These factors include the following: a) *encouraging and stimulating innovation*; b) *providing and inspiring vision*; c) *individualised support*; and d) *teamwork development*.



Anderson and King developed a contingency model which postulates the role of a leader during each of the innovation phases. They suggest that during: *a) initiation*, a leader needs to be caring, supportive, encourage ideation, open-minded and non-judgemental; *b) discussion*, a leader obtains opinions, assess and approve plans; *c) implementation*, a leader convince all stakeholders of the solution; and *d) routinization*, leader monitor effectiveness, adjusts and improves. This model proposes that leaders need to be flexible in their approach and apply different behaviours to each of the phases in the innovation process (Patterson et al., 2009). Likewise, Tierney (2008) developed a model which indicates the intricacy of the influence leadership may have on innovation. She proposes that according to the different leadership levels there is a complex interplay between the different facets of leadership (i.e. traits, behaviours and relations) and the cognition, motivation and capacity of the employee and the context.

Although the emphasis of the extant research on the relation between leadership and innovation is on effective leadership, it could also have the opposite effect (Patterson et al., 2009). Amabile noted ways in which leadership could hamper the tendency to innovate. For example, consultation often reflects a leader's support, but on the contrary excessive monitoring could be experienced as micromanagement (Patterson et al.). Hill, Brandeau, Truelove, and Lineback (2014) hold the view that visionary leaders may stifle innovation with regard to complex ill-defined problems as no vision can predict what might be original and useful. Despite this, leadership, as the catalyst and source of creativity and innovation (Agbor, 2008), still seems to be one of the most prominent variables in organisational innovation research.

#### **2.4.5.2 Organisational culture**

Many believe that the culture of an organisation is a key determinant of the occurrence of creativity and innovation (Martins & Terblanche, 2003) and the maintenance thereof (Panuwatwanich et al., 2007). According to a survey conducted by The McKinsey Quarterly ninety-four percent of senior executives are of the opinion that people and corporate culture are the main drivers of organisational innovations (Barsh, Capozzi, & Davidson, 2008).

Organisational culture may influence the degree to which creative solutions are promoted, supported and employed. Likewise Lock and Kirkpatrick are of the opinion that an innovative culture tends to encourage new means of representing problems and seeking solutions and innovators are favoured and regarded as models to be imitated (Martins & Terblanche, 2003).



Research conducted by Poskiene (2006) demonstrates that a strong and deeply embedded organisational culture is vital for sustained innovation (March-Chorda & Moser, n.d.).

Although innovation scholars are in agreement that culture plays a pivotal role in the manifestation of innovative work behaviour, the empirical evidence of types of cultures, and cultural norms and values seem scant. Based on Cameron and Freeman's (1991) evidence that organisational cultural type is a stronger predictor of effectiveness as opposed to cultural congruence and strength, Ernst (n.d.) propose that the cultural type referred to as 'adhocracy' will have a positive influence on innovative performance in financial institutions. He adapted (Figure 2.4) Cameron and Freeman's illustration of the different types of corporate culture.

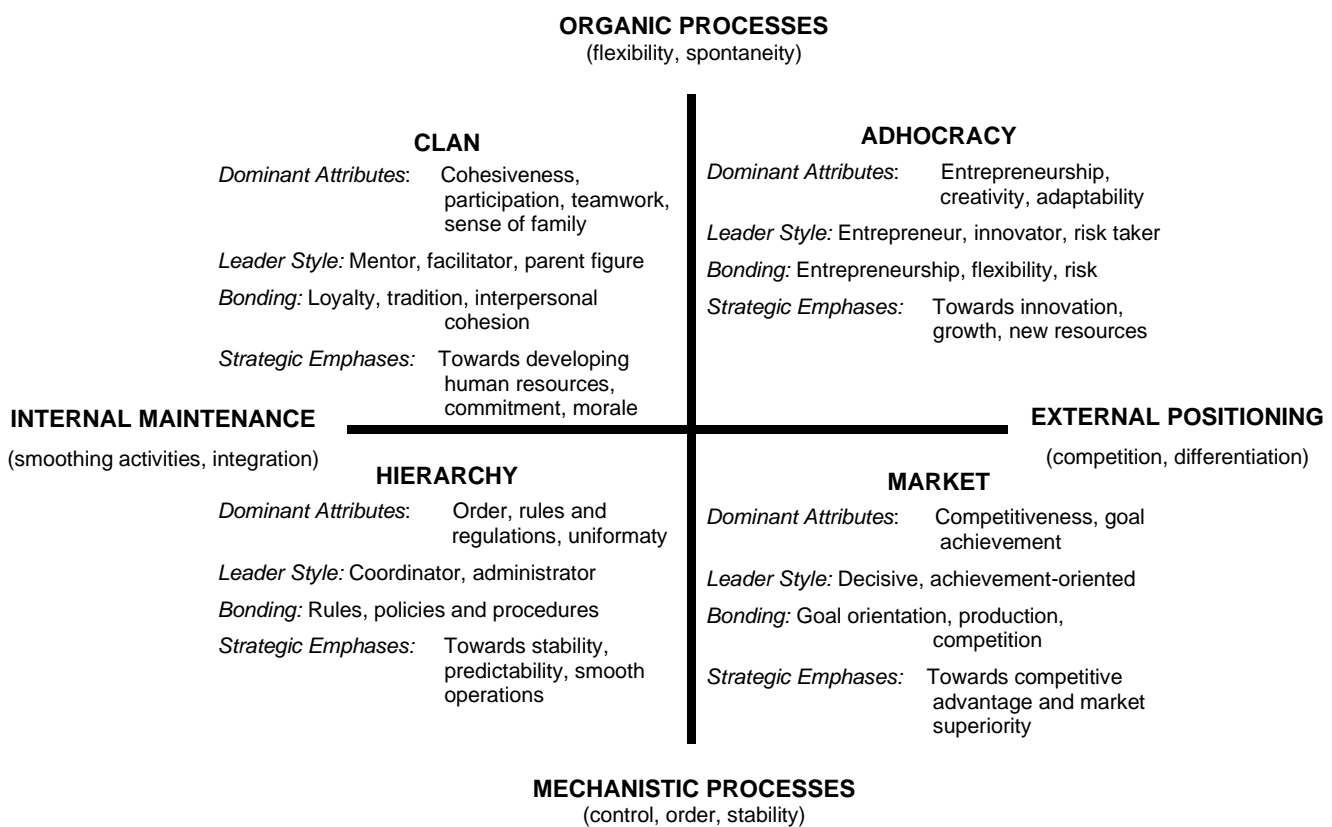


Figure 2.4. Types of Corporate Culture. Adapted from "Antecedents of innovation success at the firm level," by H. Ernst, n.d., Retrieved on May 17, 2016, from [www.dijtokyo.org/events/DIJ-05052\\_hErnst.pdf](http://www.dijtokyo.org/events/DIJ-05052_hErnst.pdf).

To synthesise the cultural values and norms, that were identified in the literature, that affect creativity and innovation, Martin and Martin (2002) designed an integrated interactive model. This model identified: "a) *strategy*; b) *structure*; c) *support mechanisms*; d) *behaviour that encourages innovation*"; and "e) *communication*" as the five key dimensions of an organisational culture that is favourable for creativity and innovation (Martin & Martin, p. 59).

Likewise, in a meta-analysis conducted by Panuwatwanich et al. (2007) three sub-factors of organisational culture for innovation emerged. These three sub-factors include: *a) creativity stimulation and encouragement; b) freedom and autonomy; and c) resource allocation.*

Conversely, research has shown that a paradoxical relationship between these two constructs may exist in that organisational culture can either enhance or hamper creativity and innovation (Martins & Terblanche, 2003; March-Chorda & Moser, n.d.).

#### **2.4.5.3 Organisational climate**

Organisational climate and the link with innovation is a rather popular topic for research. Many researchers have investigated the relationship between these two variables and found a positive association (West & Sacramento, 2012). Unlike organisational culture, a vast amount of research on organisational climate and innovation exists. Numerous models and taxonomies in support of a positive relationship between the variables have been proposed and some have been verified. West and Sacramento (2012) suggest that Amabile, Conti, Coon, Lazenby, and Heron's work environment model is possibly the most widely validated model of organisational climate for creativity and innovation.

According to comprehensive research studies and hypotheses on organisational climate for innovation a broad spectrum of dimensions that are favourable for this relationship emerged. Amabile, Barsade, Jueller, and Staw suggested that organisational encouragement is conducive for an innovative work environment and this includes: "*a) encouragement of risk-taking and a valuing of innovation from the highest level; b) fair and supportive evaluation of ideas; c) reward and recognition for innovation; d) collaborative idea flow across the organisation; and e) participative management and decision making*" (Patterson et al., 2009, p. 24). Tesluk, Farr, and Klell investigated the influence of organisational culture and climate at individual level. In their review they identified five components of organisational climate that are associated with creativity. These include: "*a) goal emphasis; b) means emphasis; c) reward orientation; d) task support; and e) socio-emotional support*" (Olori & Mark, 2013, p.57). In a review of various studies King and Anderson (2012) propose that *a) openness to change; b) risk taking; c) tolerance for debate and disagreement; and d) playfulness* are common dimensions of a climate supportive of innovation.

An overview of the literature demonstrates that a rich variety of dimensions of a climate for innovation have contributed to the compilation of models and measures of innovative corporate climates.

#### 2.4.5.4 Organisational structure and size

Burns and Stalker (1961) were the first to suggest that different situations might call for different organisational structures. They proposed two opposing types of organisational structures, the mechanistic and organic structures. The mechanistic structure is ideal for organisations that function under stable circumstances and the organic structure is most suitable for organisations faced with unstable circumstances. In a study that explored innovation blockages, Quinn found that characteristics associated with mechanistic organisations, namely “a) *short time frames*; b) *strong financial control*; c) *strong process control*; and d) *top management discounting of innovation*” inhibited innovation (Mumford et al., 2002, p. 731). Accordingly, the notion is that the adoption of innovation is better if an organisation has an organic rather than a mechanistic structure (Damanpour, 1991).

Based on Patterson et al.’s (2009) review of literature, they identified the following structural factors as those that have the greatest impact on innovation. These are centralisation, formalisation and complexity. Centralisation refers to the extent to which decision-making authority lies at the top of the organisational hierarchy. Centralisation is widely considered to impose a detrimental effect on innovation due to its restriction on information flow and communication. In contrast, decentralisation encourages participation, allowing for more opinions to be raised during ideation. In contrast, research also indicates that centralisation is positively associated with idea implementation (Zaltman & Holbek, 1973).

Formalisation is the degree of emphasis placed on organisational rules and procedures. The notion is that formalisation tends to limit innovation as decision makers are restricted to seek new sources of information (Patterson et al., 2009). Although this seems plausible, there is another school of thought that preaches the opposite. For example, Khandwalla presented evidence of a significant correlation between high formalisation and implementation of innovations in bureaucratic organisations in India. Drach-Zahany, Somech, Granot, and Spitzer suggest that a higher level of autonomy-flexibility during the implementation stage might even be detrimental for innovations (Prakash & Gupta, 2008). Accordingly, formalisation appears to have a negative effect on innovation during ideation and a positive effect during the implementation stage.

Research results indicate that occupational specialisation within an organisation (complexity) is positively correlated with innovation. Aiken and Hage opine that in complex organisations a wide array of specialists in different subunits increases the depth of the knowledge pool which,

in turn, increases ideation. Moreover, Kimberley and Evanisko agrees with them that a wider variety of specialists supplies a more diversified knowledge pool and enables the cross-fertilisation of ideas (Damanpour, 1996).

Certain contextual variables have been shown to moderate the focal relationship, which include the type of organisation that adopts innovations, their scope, the type of innovation and the adoption phase. An analysis of the moderator variables demonstrated that the type of organisation that adopts innovations and their scope are more effective moderators than the type of innovation and the phase of adoption (Damanpour, 1991).

The research on the organisational size-innovation relationship seems to be relatively inconclusive (Patterson et al., 2009). Whilst large organisations are rich in resources, present greater challenges and more promotional and growth opportunities for employees and exert more control over the external environment, they also tend to be more bureaucratic, resistant to change and offer impersonal work environments (Damanpour, 1996). Additionally, there is also a possibility that this size-innovation relationship is mediated by a variety of multilevel and external factors (Patterson et al.). In terms of organisational longevity, West and Richter (2008) propose that young organisations tend to be more flexible and open to innovate as opposed to more established organisations.

#### **2.4.5.5 Work design**

The latest trend in leading innovation and design companies, such as Google and Facebook, is to study work in its totality and accordingly create working conditions (job content, environment and interpersonal reaction) that is conducive to individual and group innovation.

##### **2.4.5.5.1 Job characteristics**

The extant research suggest that complex and demanding jobs (e.g. jobs with a high degree of autonomy, task significance, task identity, task and skill variety and feedback) tend to have a positive association with creativity and innovation. Job design, in particular, have demonstrated to have a positive influence on an employee's intrinsic motivation and self-efficacy (Patterson et al., 2009). Coelho and August (2010) conducted a component-wise study whereby they studied the impact of each job characteristic on the creativity of FLE's. The results showed that the job characteristics interact with each other to affect creativity. Accordingly, they argue that in order to foster creative behaviours, service managers should increase employee job autonomy, variety, feedback and identity.

#### **2.4.5.5.2 Job demands**

Research demonstrates that moderate job demands, and time pressure is most likely to lead to individual innovation (Patterson et al., 2009). Martín, Salanova, and Peiró (2007) utilised the infamous job demands-control model to predict individual innovation at work as an active coping mechanism. They discovered a positive relationship between job demands and individual innovation within a context that offers high job resources. Bunce and West's (1995) research confirms Martín et al.'s findings. On the contrary, Amabile, Conti, Coon, Lazenby, and Herron discovered that workload pressure, which includes a time constraint, may impede creativity and innovation if the pressure is seen as too severe (Rasulzada & Dackert, 2009). Moreover, Patterson et al. (2009) are of the opinion that high job demands tend to have a negative effect on job satisfaction, stress levels and staff turnover.

#### **2.4.5.5.3 Physical resources**

Claxton claims that the mere perception of the sufficiency of resources (e.g. funds, people, facilities, and information) may have a psychological effect on engagement in creative work (Rasulzada & Dackert, 2009). Contemporary organisations are paying more attention to the spaces wherein innovative activities take place. Beunza and Stark emphasise the importance of an office space and layout in the enhancement of innovation. They claim that large, open-plan office spaces with clusters of employees, each holding a job from a different job family, cultivate innovation. Other organisations have purpose-built innovation laboratories which are equipped and furnished with innovation-stimulation resources (e.g. computer-generation tools, whiteboards, and idea elicitation tools) (Patterson et al., 2009). Many companies are considering the impact of their infrastructure and resources on creativity and innovation and create such spaces based on personal judgement as opposed to empirical evidence. In general, the research on this topic seems to be rather limited and somewhat fragmented (Moultrie, Nilsson, Dissel, Haner, Janssen, & Van der Lugt, 2007).

#### **2.4.5.5.4 Role expectations**

An individual's perceptions of the role requirements may also regulate innovative behaviour. Should employees believe that they are expected to exhibit innovative behaviour, they are most likely to devote their time and energy towards such behaviour. Previous research suggests that there is a positive relationship between the individual's perceptions of the expectations or role requirements pertaining to innovation and innovative behaviour in the workplace. Tierney and Farmer built upon this research by hypothesising that expectations for creativity will influence creative performance in terms of the 'Pygmalion Effect'. Accordingly,

they propose that superiors who expect their subordinates to display creative behaviour tend to give more creative-relevant support and in turn enhance the subordinate's creative self-efficacy (Hammond et al., 2011).

#### **2.4.5.6 Organisational resources**

Generally, resource availability is expected to have a positive relationship with innovative behaviour. The results of a comprehensive organisational innovation meta-analysis conducted by Damanpour (1991) indicate that there is a positive relation between slack resources and organisational innovation.

Rosner argues that slack resources provide an organisation with the opportunity to “purchase innovations, absorb failure, bear the costs of instituting innovations, and explore new ideas in advance of an actual need” (Damanpour, 1991, p. 559). Likewise, a content analysis of the transcripts in an interview study conducted by Amabile and Gryskiewiez, nine environmental qualities that foster creativity were identified. Enough resources were amongst these qualities and was defined as follows: “access to necessary resources, including facilities, equipment, information, funds and people” (Amabile, 1988, p. 147).

Beyond a certain threshold the resources-innovation relationship appears to be insignificant. Moreover, researchers have detected ‘escalation’ in the innovation process. This is when innovators reach a point where they already have spent so much on the innovative venture that it would be too exorbitant to discontinue implementation (Patterson et al., 2009).

#### **2.4.5.7 Incentives and rewards**

Even though the effect of intrinsic motivation on innovation should not be negated, extrinsic rewards such as monetary rewards, promotions and recognition awards are also positively associated with innovation. Abbey and Dickenson (1983) presented evidence that recognising performance by means of rewards increased employees within R&D units' willingness to experiment with ideas. Eisenberger and Cameron (1996) found empirical support that extrinsic motivators are positively correlated with the implementation phase of the innovation process at the individual behavioural level. However, they argue that an extrinsic motivator may inhibit innovation should it be perceived as more important than the task at hand. According to Patterson et al. (2009), most of the research on this topic has been conducted within laboratory settings which delivered contradictory results. Therefore, further research with regard to the extrinsic motivation and innovation association is required.

#### **2.4.5.8 Environment and organisational strategy**

The environment often dictates organisational innovation in terms of its intensity, direction and urgency. Organisations that demonstrate sustainable innovation tend to have in-depth knowledge of their environment (which constitutes opportunities and threats) and is able to adapt quickly to environmental changes (i.e. align them to their environment). Fiol and Lyles suggest that these organisations are malleable, thus having the potential to learn, unlearn and relearn (García-Morales, Llorens-Montes, & Verdú-Jover, 2006).

Depending on the position of organisational innovation in an organisation's strategy, a firm is considered as either conservative or enterprising (García-Morales et al., 2006). Conservative organisations merely engage in organisational innovation in response to environmental threats, whereas enterprising organisations tend to take a proactive approach and create and control their environment. Miles and Snow (1978) thus believe that the key to innovative strategy is the presence of organisational proactivity. Moreover, Meyer (1982) concluded that strategic variables are better predictors of an organisations ability to adapt to environmental jolts as opposed to structural variables and measures of organisational slack.

Although the research on innovation and organisational strategy is scant, it appears that organisations that align their strategy to their environment and that are proactive in their approach to environmental change tend to be more innovative.

#### **2.4.6 Concluding Remarks: Organisational-Level Antecedents**

Based on the review of the literature there is no doubt that, in accordance with the multilevel analysis perspective, other interacting variables on a wider level of analysis, may determine the degree of success with regard to the service innovation outcomes on the individual, frontline level. The choice of organisational-level antecedents in the current research study was made based upon the relevance of these antecedents to the frontline context.

##### **2.4.6.1 Empowering job characteristics**

Idaszak and Drasgow state that job characteristics enable one to differentiate between jobs and to determine internal occupational motivation with regards to designing and redesigning of jobs (Buys, Olckers, & Schaap, 2007). The current research study includes all five of Hackman and Oldham's (1975) job characteristics (i.e. job autonomy, task significance, task identity, task variety and task feedback).



Of the five job characteristics, autonomy is the one characteristic that has been studied most extensively. Autonomy is defined as the extent to which a job provides considerable freedom, independence and discretion to the employee in planning and executing his or her duties (Robbins, Judge, Odendaal, & Roodt, 2009; Slåtten & Mehmetoglu, 2011). Hackman and Oldham suggest that autonomy increases the feelings of responsibility for the work outcomes which may ultimately increase intrinsic motivation (Cadwallader et al., 2010). The services literature emphasises the role of autonomy within the services context. Bowen and Lawler discovered several benefits from providing autonomy to FLE's. Amongst others, autonomy delivers more enthusiastic and friendly FLE interactions with customers, whilst rendering services, innovative service ideas, a speedier response to customers' needs, word-of-mouth promotion and a positive regard towards the job (Kerrin & Gatto-Roissard, 2009). A study conducted by Parker and her colleagues revealed that empowering the workforce by providing employees with more job autonomy had a long-standing effect on proactive work behaviour, which includes self-implementation of ideas and problem-solving (Patterson et al., 2009). Therefore, a FLE who perceives that he or she has the freedom to make service delivery decisions and take risks will most probably be more inclined to display innovative service behaviour.

Task significance refers to the extent to which a job has or is perceived by the employee to have a positive impact on the lives or work of others (Robbins et al., 2009). Should the employee's efforts affect the wellbeing of other people, the individual may be more enthused by it (Coelho & Augusto, 2010). Adaptive service offerings are expected to lead to increased customer satisfaction within the frontline service context and in turn this may contribute to the employee's perception of the degree of task significance associated with his or her job. The literature suggests that task significance will increase intrinsic motivation and according to Amabile's componential model of creativity this should have a positive impact on employee creativity.

Hackman and Oldham define feedback as the extent to which employees receive concise and direct information pertaining to their work performance (Coelho & Augusto, 2010). Without feedback, whether it is given by the FLE's supervisor or customers, the FLE does not have an indication as to how he or she should feel about his or her performance. This consequently reduces the FLE's intrinsic motivation, which in turn, according to Amabile's (1988) componential model of creativity, has a detrimental effect on innovation.



Moreover, Earley, Northcraft, Lee, and Lituchy state that feedback also enables the employee to evaluate his or her current performance and stimulate him or her to investigate different, more improved courses of action in the future (Coelho & Augusto, 2010). By acquiring information with regard to their work performance and during the process of seeking different work routes, the FLE becomes more familiar with his or her job, which in turn enhances his or her technical skills.

Task identity is the extent to which a job requires the completion of a whole and identifiable piece of work (Robbins et al., 2009). Similar to task significance, job identity contributes to a psychological state of meaningfulness which in turn increases intrinsic motivation and thus innovation. Becherer, Morgan, and Richard claim that FLE's often work across the service delivery chain. Those with jobs high on task identity works from prospecting through to after sale-service (Coelho & Augusto, 2010). Accordingly, it is expected that FLE's who serve the client through the complete service delivery chain tend to gain a better understanding of their needs. Consequently, an increase of the FLE's knowledge with regard to their customers and the service delivery process tend to enhance their technical skills, which ultimately lead to improved innovative problem-solving (Coelho & Augusto).

Task variety refers to the degree to which an employee must perform a wide spectrum of duties and/or utilise a variety of apparatus or procedures that might require the application of a diverse skillset. The componential model of creativity suggests that variety in this sense positively affects creative performance (Coelho & Augusto, 2010). Likewise, Van der Heijden, Schepers, Nijssen, and Ordanini (2013) refer to literature in the field of organisational behaviour which emphasise that work variety is a key predictor of employee creativity. They are of the opinion that managers may increase the variety in a FLE's work role by extending the product range which the employee is to service, by matching or exposing the FLE to new customers, and by allocating employees to other service jobs which may vary in terms of complexity.

#### **2.4.6.2 Innovative organisational climate**

Although organisational culture and climate are closely related (Baker, cited in Wallace, Hunt, & Richards, 1999), some creativity and innovation researchers feel it is important to distinguish between these two constructs (McLean, 2005). However, according to Field and Ableson, numerous studies have been conducted in an attempt to detach these two constructs (Wallace et al.), but researchers came to a conclusion that there is a definite overlap. Climate refers to the shared perception of the manifestation of practices and behavioural patterns which are

embedded in the beliefs, assumptions and values that constitute organisational culture (McLean, 2005).

Likewise, Russel argues that culture supports innovation by establishing an organisational climate that motivates and sustains the intricate interactive process of social exchange which is required for successful innovation (Olori & Mark, 2013). Accordingly, one could reason that corporate climate is the behavioural manifestation of an organisation's culture and therefore the former is probably easier to measure. Thus, the culture of an organisation fosters an organisational climate, which signifies how employees of an organisation experience that organisation's culture. The current research study therefore predominantly focuses on organisational climate as it is assumed to reflect how the culture of the respective organisation is expressed through the behaviour of its employees.

Climate constitutes the perceptions of the work environment and can be measured on individual, group and organisational level of analysis. Individual perceptions of the work environment are generally referred to as psychological climate. When such individual perceptions are shared to such an extent that it can be aggregated on either group or organisational level, it will respectively be referred to as group or organisational climate (West & Sacramento, 2012). Although conflicting views with regard to the nature of organisational climate exists, the conceptualisation that organisational climate is an aggregated psychological climate is widely accepted. James, Joyce, and Slocum define psychological climate as a "set of perceptions that reflect how work environments, including organi[s]ational attributes, are cognitively appraised and represented in terms of their meaning and significance for individuals" (Baer & Frese, 2003, p. 47). In the current research study, climate is measured on an organisational level and for such purposes the following definition for organisational climate applies: "[T]he shared perceptions, feelings and attitudes that organisational members have about the fundamental elements of the organisation, which reflect the established norms, values and attitudes of the organisation's culture and influences individuals' behaviour positively or negatively" (Castro & Martins, 2010, p. 2).

Seminal work conducted by Mischel proposes that strong contexts, which include a strong organisational climate, limit the variety of acceptable behavioural patterns amongst the workforce and consequently tends to homogenise individual responses (West & Sacramento, 2012). Many researchers have emphasised the effect that an organisational climate may have on the extent to which creativity and innovation are supported within the organisation. Ekvall believes that an organisational climate for innovation determines the degree to which innovative solutions are encouraged, supported, implemented and regarded as desirable

(Rasulzada & Dackert, 2009). FLE's who perceive their work environment to be conducive of innovative behaviour will ultimately be more inclined to display such behaviour. But how does one define the environment? The general notion is that "supportive and challenging climates encourage innovation, whereas environments characterised by distrust, personal hostilities, limited autonomy and unclear work goals, inhibit the implementation of ideas" (Patterson et al., 2009, p. 24).

#### **2.4.6.3 Empowering leadership**

Rosing et al. (2011) suggested that over the past few decades the emphasis in leadership research has shifted from the more stable leadership traits and styles to situational variability and flexible leadership behaviours, as well as leadership that is adjusted to each individual follower. This leadership approach has also proved empirically to be an effective motivating factor for innovative behaviour - "the less a theory focuses on stable and inflexible leadership styles and the more it incorporates flexibility and leadership behavior[s], the better it is able to explain innovation" (Rosing et al., p. 957). The focus of previous research on the relation between leadership and innovation was predominantly of a comparative nature - such as controlling versus supportive leadership styles (Slåtten et al., 2011). Another popular former approach to such studies was investigating various components of transformational leadership and the effect thereof on individual innovation (Jung et al., 2003; Kao, Pai, Lin, & Zhong, 2015; Weng, Su, & Lai, 2009).

The literature suggests that empowerment is vital for service excellence in general. Despite this linkage, the extant research on empowering leadership and innovation in frontline service delivery is limited (Slåtten et al., 2011). Zhang and Bartol (2010, p. 109) consider empowering leadership as a "leadership approach with considerable promise of influencing employee creativity". In support of this hypothesis, the findings of a study conducted by Slåtten et al. revealed that empowering leadership is indeed essential for the manifestation of creativity in frontline service jobs.

Ahearne, Mathieu, and Rapp (2005) conceptualise empowering leadership as behaviour which places emphasis on the importance of the work, makes provision for participative decision-making, expresses confidence in the subordinate's work performance and eliminates or reduces bureaucratic barriers. Inherent to these behaviours, the delegation of authority to the subordinate emerges as a strong theme in the empowering leadership and innovation literature (Zhang & Bartol, 2010). From the employee's perspective, an empowering leader is considered someone who gives him/her the freedom and scope to make their own decisions

and commitments (Slåtten et al., 2011). As with the leader-member exchange theory, empowering leadership is rooted in this vertical dyadic linkage.

Forrester is of the opinion that the primary reason why organisational empowerment initiatives fail, is that they tend to take a universal empowerment approach. For such initiatives to be effective, managers need to distinguish between their subordinates and determine whom, and to what extent, should be empowered. Numerous empirical studies have indicated that empowerment can effectively be seen as a dyadic relationship between a manager and an individual subordinate (as cited in Zhang & Bartol, 2010).

## **2.5 INTERRELATIONSHIPS AMONG THE LATENT VARIABLES OF INTEREST**

A general overview of the extant research on multi-level innovation within organisations and the in-depth exploration of key antecedents of FLSI on the individual level served as a preliminary platform upon which hypothesised interrelationships among the latent variables were derived. These proposed interrelationships will subsequently be elaborated upon.

### **2.5.1 Psychological Ownership and Frontline Service Innovation**

Sieger et al., (2013) revealed that psychological ownership leads to positive attitudinal and behavioural organisational effects and includes increased affective commitment, extra-role behaviour, organisational citizenship behaviour, job satisfaction and reduced workplace deviance. However, the association between job-based psychological ownership and FLSI has not been investigated yet, but Van Dyne and Pierce (2004) regard a sense of ownership important for service employees who have direct customer contact.

Most frontline service jobs do allow for some degree of discretionary behaviour, which gives FLE's the opportunity to exercise control, gain knowledge and personally invest in their work, which is all likely to cultivate positive feelings of possession (Van Dyne & Pierce, 2004). FLE's who hold a strong sense of psychological ownership towards their job would exercise control over the situation as they would typically regard the customer and their problems or needs to be "theirs". Accordingly, the current researcher proposes that a FLE who has a strong sense of psychological ownership would go to great lengths (i.e. make personal sacrifices and exert extra effort) to satisfy a customer's demands or exceed their expectations in order to build a strong longstanding relationship with the customer.

**Hypothesis 1:** *Psychological ownership positively influences frontline service innovation.*

### 2.5.2 Psychological Safety and Frontline Service Innovation

Edmondson, Higgins, Singer, and Wiener (2016) infer that psychological safety is vital in assisting employees to learn and change their behaviour, especially in interpersonally challenging occupational environments. Psychological safety influences the way in which individuals engage in their work and their ability to adjust their professional approach (Kahn, 1990). Even though the individual is willing to alter their interpersonal approach, their perceptions about the possible risk may inhibit their motivation to act on such an intention (Edmondson et al.). Mavrokordatos (2015) postulates that when an individual feels a sense of support for experimentation – where risk and error is considered part and parcel of learning, the individual will be more likely to take initiative. Edmondson and Lei (2014, p. 31) believe that a psychologically safe environment “enables divergent thinking, creativity, and risk-taking and motivates engagement in exploratory and exploitative learning, thereby promoting performance”.

The FLE, especially in a multi-cultural South Africa, must deal with a diverse clientele. Every customer has different beliefs, perceptions, assumptions and value systems which ultimately dictate their behaviour. Due to the heterogeneous nature of the FLE’s work (i.e. varying customer behaviour, needs and service expectations) the FLE is left with the challenging task of continuously adapting to newness and acting thereupon. FLE’s who perceive their workplace as supportive with regard to experimenting with service initiatives and accepts a margin of error will be more likely to take personal risks and consider creative alternatives.

**Hypothesis 2:** *Psychological safety positively influences frontline service innovation.*

### 2.5.3 Psychological Safety, Creative Self-Efficacy and Psychological Ownership

The research study of Abror, Akamavi, and Akamavi (2016) showed that there is a positive relationship between psychological safety and self-efficacy in Indonesian companies. Other than their research there is no other, to the current researcher’s knowledge, studies which explore the direct relationship between these two variables. Psychological safety is predominantly derived from organisational development and change theory (Edmondson, 1999), which is embedded in and predicts learning behaviour within organisations.

Based on such research, one can infer that employees who feel that the organisation tolerates risk taking and failure is more likely to display such behaviour, learn from their mistakes and

subsequently develop their professional skills. Edmondson et al. (2016, p. 66) suggest that “high psychological safety can catalyse a positive self-fuelling cycle for adult development”. Accordingly, knowledge acquisition and experience are likely to lead to improved work performance which will, most probably, in turn reinforce the employee’s belief in his or her capability to successfully perform the job, or in this instance, creative capabilities.

The theory of psychological ownership is grounded upon the assumption that an individual wish to control his or her environment due to the innate need to experience self-efficacy (Buchem, 2012). Pierce, Jussila, and Cummings (2009), refer to the inclusion of self-efficacy as a sub-dimension of the construct of psychological ownership in other empirical research studies. Although the current researcher could not find enough scientific support for a positive correlation between creative self-efficacy and psychological ownership in the proposed direction, she suggests that this relation could be justified within the frontline service context. Accordingly, it is postulated that the FLE who truly believes in his or her ability to display innovative work performance will be more likely to take control or rather ownership of his or her job responsibilities.

The current researcher hypothesise that the FLE, whose sense of psychological safety is intact, will presumably develop positive beliefs about his or her creative performance and assume increased psychological ownership of his or her job functions and consequently be more inclined to present innovative solutions and take the risk by implementing such solutions.

***Hypothesis 3:*** *Psychological safety positively influences creative self-efficacy.*

***Hypothesis 4:*** *Creative self-efficacy positively influences psychological ownership.*

***Hypothesis 5:*** *The relationship between psychological safety and psychological ownership is mediated by creative self-efficacy.*

#### **2.5.4 Empowering Leadership, Psychological Safety and Innovative Organisational Climate**

A work environment which is free from threat of job loss and the pressures of increased productivity output, generally lay a solid foundation whereupon psychological safety is to be anchored (Belfont, 2016). Psychological safety generally appears to be present in climates that promote risk-taking, learning and innovation (Kark & Carmeli, 2009). Leadership is often regarded to be one of the most influential constructs when it comes to organisational climate studies (Cloete, cited in Eustace & Martins, 2014). Carmeli, Reiter-Palmon, and Ziv (2010) are

of the opinion that psychological safety is generally determined by the leader due to the climate which he or she creates and the extent to which they are receptive of novelty, risk and ambiguity (all related to innovative behaviour). Although the research on empowering leadership and its association with psychological safety appears to be limited, Mavrokordatos' (2015) study on psychological safety and creative work involvement showed that inclusive leadership has a significant effect on psychological safety. Edmondson et al. (2016) suggest that psychological safety is more profound when the status gap between the leader and the subordinate is deliberately narrowed by the leader, when the leader upholds a mutually supportive approach, acceptance and respect.

The current researcher postulates that a FLE whose supervisor or line manager creates a interpersonal work environment that is open, supportive and provides a degree of freedom in terms of innovativeness, will be more inclined to hold feelings of interpersonal safeness, where his or her actions or interpersonal risk-taking is free from destructive appraisal.

**Hypothesis 6:** *Empowering leadership positively influences innovative organisational climate.*

**Hypothesis 7:** *Empowering leadership positively influences psychological safety.*

**Hypothesis 8:** *The relationship between empowering leadership and psychological safety is mediated by innovative organisational climate.*

### **2.5.5 Empowering Leadership, Innovative Organisational Climate and Psychological Ownership**

The relation between various leadership styles or approaches and psychological ownership have been subjected to research. Li (2008) investigated the relationship between different leadership styles, perceived control and psychological ownership of the job. The results indicated that participative leadership style is positively related to perceived control (i.e. autonomy) and in turn perceived control is positively related to psychological ownership. Further to this, Alok (2014) researched the link between authentic leadership and psychological ownership. Based on his findings, authentic leadership positively influences organisation-based promotive psychological ownership. Further to this Arshad and Abbasi (2014) found that spiritual leadership has a significant impact on psychological ownership.

Apart from of the aforementioned studies, there does not seem to be any extant research on the influence between empowering leadership and psychological ownership. Van Dyne and



Pierce (2004, p. 455) does, however, suggest that managers or supervisors should allow their FLE's "the opportunity to exercise control, acquire knowledge, and personally invest in their work". Bahr (2016, p. 8) is of the opinion that empowering FLE's to manage some customer service issues on their own, or to trust the FLE with the freedom to serve the customer the way they think best, could boost the FLE's confidence and lead to outstanding customer service. Moreover, she believes that the "but-we've-always-done-it-this-way approach" to customer interactions not only dehumanizes frontline staff, but also reduce customers' respect for the FLE.

Although the current research on the association between innovative organisational climate and psychological ownership is limited, Mayhew, Ashkanasy, Bramble, and Gardner (2007) suggest that organisation-based psychological ownership is generally influenced by a myriad of factors amongst which organisational climate tend to be an important construct. Schirle (2016) argue that the theory of psychological ownership is indicative of the psychological influence which the work environment has on an employee. She claims that work environments that cultivate high psychological ownership tend to exhibit improved work performance and an increase in production outputs. FLE's who perceive an organisational climate where a premium is placed on innovation, may associate stronger with their job role and are subsequently more likely to take job-based psychological ownership.

Due to the FLE's central role in ensuring customer satisfaction, loyalty and enhancing the organisation's competitive advantage, it is in management's interest to invest their energy in these individuals and create a work environment where perceived ownership of the job function and accountability for customer retention is fostered. Managers should exhibit empowering leadership by broadening their interactive relationship with FLE's from a restricted focus on operational routine work to a broader focus where they encourage employee self-determination, participative decision making and autonomous work performance.

**Hypothesis 9:** *Empowering leadership positively influences psychological ownership.*

**Hypothesis 10:** *Innovative organisational climate positively influences psychological ownership.*

**Hypothesis 11:** *The relationship between empowering leadership and psychological ownership is mediated by innovative organisational climate.*



### 2.5.6 Emotional Intelligence and Frontline Service Innovation

Apart from Boxer and Rekettye's (2011) attempt to integrate and evaluate the relative impact of two constructs, innovation in service and emotional intelligence, on the customer's commitment and loyalty to the firm, the current researcher could not find any other relevant research on the link between these two constructs. The findings of Boxer and Rekettye's study revealed that the relations between emotional intelligence and innovation in service do have the aforementioned desired effect. Accordingly, it will be to the benefit of an organisation to appoint, or alternatively upskill, FLE's who are more connected to their emotions and have the skill to identify the feelings of another individual during interpersonal interactions. Boxer and Rekettye (p. 227) believe that such employees will "tie' their customers with a very strong emotional bond".

The current researcher hypothesises that the quality of the innovative interaction at the customer interface is closely linked to the FLE's level of emotional intelligence. This interaction is viewed as the intelligent utilisation of emotion by the FLE which subsequently enables the employee to correctly identify the customer's needs and adapt his or her emotion and problem-solving approach accordingly.

**Hypothesis 12:** *Emotional intelligence positively influences frontline service innovation.*

### 2.5.7 Empowering Job Characteristics, Creative Self-Efficacy and Frontline Service Innovation

Creative self-efficacy is a relatively new construct and its correlation or mediating effect on other variables has not been widely tested. However, the mediating effect of psychological empowerment has undergone extensive research and the conclusion that was drawn is that complex job design leads to individual-level psychological empowerment within the workplace. The construct of psychological empowerment in this instance included various dimensions (i.e. meaning, value of work, competence, personal mastery, self-efficacy, an effort-performance expectancy, self-determination, perception of autonomy, and influence on work outcomes) which in turn had a positive impact on employee intrinsic motivation, job satisfaction, organisational commitment and organisational citizenship behaviour (Pierce et al., 2009). Judeh (2012) assessed the effect of empowering job characteristics on self-efficacy and job performance. The results demonstrated that all dimensions of job characteristics (i.e. skill variety, task identity, task significance, autonomy and feedback) contributed to the positive impact of job characteristics on self-efficacy and job performance respectively but failed to find support for the correlation between self-efficacy and job performance. Based on Coelho and

Augusto's (2010) research there appears to be a positive association between four of Hackman and Oldham's five job characteristics (i.e. job autonomy, skill variety, feedback and task identity) and the creative behaviour of FLE's. One could therefore reasonably expect that empowering job characteristics, which consists of Hackman and Oldham's five job characteristics, should impact positively on a FLE's demonstration of FLSI.

As the pioneers of creative self-efficacy research, Tierney and Farmer (2002) found that creative self-efficacy predicted creative performance above and beyond the effects of job self-efficacy. According to a study conducted by Hsu, Hou, and Fan (2011) employees, within a service setting, with a high level of creative self-efficacy, displayed a high level of innovative work behaviour. They believe that service employees are compelled to demonstrate innovative behaviour as a result of interaction (i.e. handling customer complaints and solving customer problems) with customers.

The current researcher predicts that those FLE's who have confidence in their innovative ability will cope better with uncertainties (i.e. service problems), failures and will more readily adapt to interpersonal challenging situations. Moreover, she proposes that the prevalence of high job autonomy, task identity, feedback, skill variety and task significance in the FLE's job design will lead to an increased level of creative self-efficacy, which in turn will strengthen the relation between the empowering job characteristics and FLSI. In the current study job characteristics have been defined as empowering job characteristics as it is seen as empowering the FLE to engage in FLSI behaviour directly or indirectly.

**Hypothesis 13:** *Empowering job characteristics positively influence creative self-efficacy.*

**Hypothesis 14:** *Creative self-efficacy positively influences frontline service innovation.*

**Hypothesis 15:** *The relationship between empowering job characteristics and frontline service innovation is mediated by creative self-efficacy.*

### **2.5.8 Empowering Job Characteristics, Psychological Ownership and Psychological Safety**

Pierce et al. (2009) state that the individual-level effect of work design, with specific reference to the psychological impact thereof, has not received extensive empirical attention. They recommend that Hackman and Oldham's Job Characteristics Model should be revised and that the former mediating psychological states (i.e. experienced meaningfulness of work,

experienced responsibility for work outcomes, and knowledge of results) should be replaced with psychological ownership. Lee and Song (2014) investigated the relationships between job characteristics and service quality and the mediating effect of psychological ownership between these two constructs. The findings revealed that there is firstly, a positive relationship between job characteristics and psychological ownership; secondly, a positive relationship between psychological ownership and service quality; and thirdly, a positive correlation between job characteristics and service quality. Finally, they found that psychological ownership had a partially mediating effect on the relationship between job characteristics and service quality. Moreover, Elsbach and Hargadon propose that three psychological states (i.e. positive affect, psychological safety, and cognitive capacity) are important intervening constructs between job design and creativity (Pierce et al.).

Phipps, Malley, and Ashcroft (2012) proposed that job characteristics (with specific reference to the psychosocial components of the work environment) have an influence on the organisational safety climate. Their research study explored the relationship between two job characteristics models – *a) the demand-control-support* (Karasek & Theorell); and the *b) effort-reward imbalance* (Siegrist) – and organisational safety climate. They established that both models contributed to the prediction of an organisational safety climate, with the demand-control-support making the greatest contribution. They found positive relationships between demand, control and support based on the Job Content Questionnaire and the prediction of safety climate scores. Consequently, their findings suggest that the presence of active learning will increase as the safety climate increase in a high demand, high control work setting.

Apart from the abovementioned research, the current researcher could not find any other relevant empirical evidence to support the hypothesised relationships between Hackman and Oldham's (1975) empowering job characteristics and psychological ownership and psychological safety respectively. It is thus proposed that a FLE whose job is designed in such a way as to allow the job incumbent to utilise his or her own discretion, to render a complete service (from enquiry to solution implementation), receive sufficient feedback (i.e. supervisory feedback and customer feedback), perceive to have a significant impact on the life of another individual and presents task variety, would supposedly take increased psychological ownership of his or her job and feel 'safe' to take initiative during the service delivery process.

**Hypothesis 16:** *Empowering job characteristics positively influence psychological ownership.*

**Hypothesis 17:** *Empowering job characteristics positively influence psychological safety.*

## 2.6 CHAPTER SUMMARY

The aim of this chapter was to provide an overview of the relevant literature and integrate this information with the current research study. This chapter elaborated on multi-level organisational antecedents which led to the conceptualisation of the theoretical model that will be subjected to evaluation in the current research study. Figure 2.5, presented below, serves as a graphical illustration of the hypothesised interrelationships between the latent variables (viz. psychological ownership, psychological safety, creative self-efficacy, emotional intelligence, empowering job characteristics, innovative organisational climate, empowering leadership and FLSI). The research methodology to be applied in the current research study will be discussed in the next chapter.

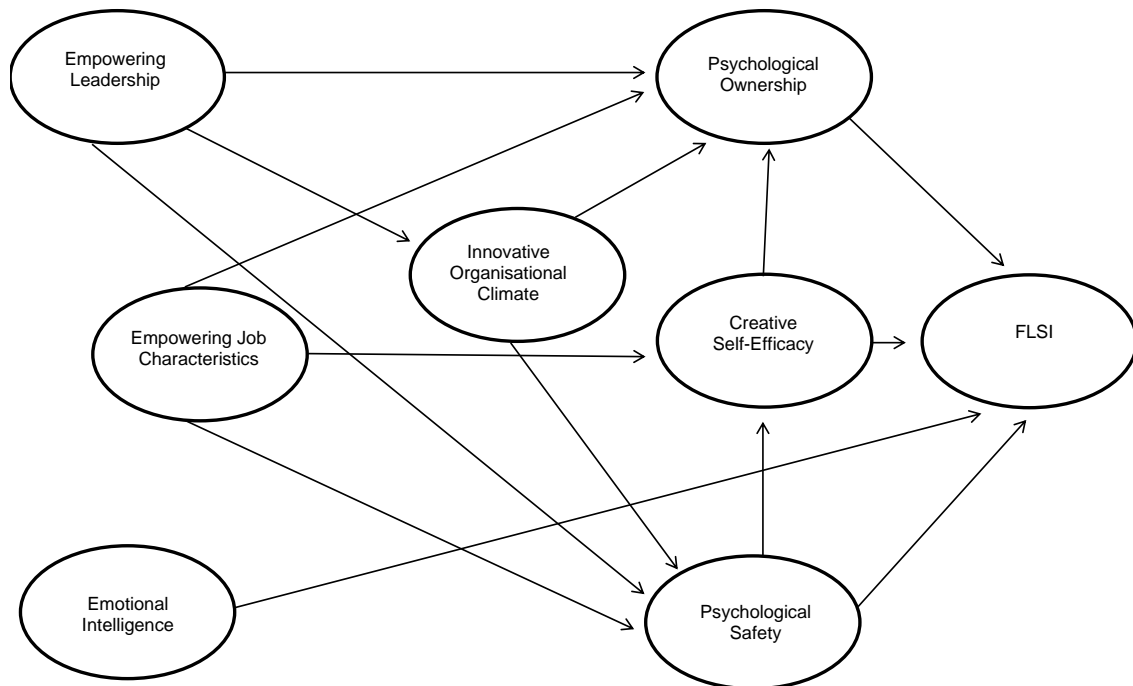


Figure 2.5. Frontline Service Innovation Structural Model

## CHAPTER 3

### RESEARCH METHODOLOGY

#### 3.1 INTRODUCTION

This chapter provides a thorough description of the methodology that was applied in this study as a means to gain answers to the research initiating question: “What are the antecedents of Frontline Service Innovation (FLSI) among Frontline Employees (FLE’s) employed by agricultural retail, trade and services organisations operating in the Western Cape?”

The purpose of the research methodology section is to describe the rationale for the application of specific techniques and procedures that were utilised to identify, select and analyse information used to answer the research problem. It thus allows the reader to assess the study’s overall validity and reliability (Kallet, 2004). Babbie (1998) warns that by failing to provide an explanation of the reasoning behind the implementation of the scientific study, one may obtain research findings that are regarded as extremely problematic and suspect.

Before one provides an overview of the methodology applied in the current research study, it is advisable to revisit the research objectives. The primary objective of the current study was to develop and empirically test a structural model that explains the antecedents of variance in FLSI among FLE’s employed by an agricultural retail, trade and services organisation operating within the Western Cape.

This research study aims to:

- Identify the most salient antecedents of FLSI among employees employed by an agricultural retail, trade and services organisation operating in the Western Cape;
- Propose and test an exploratory FLSI structural model; and
- Confirm the managerial implications of the research findings and recommend practical interventions to increase FLSI among FLE’s employed by an agricultural retail, trade and services organisation operating in the Western Cape.

#### 3.2 PATH HYPOTHESES

In order to compile and empirically test a structural model that explains the antecedents of variance in FLSI among FLE’s employed by agricultural retail, trade and services organisation operating within the Western Cape, seventeen path hypotheses were developed.

In the current structural model, the following path hypotheses could be stated or formulated based on the defined structural model.

- Hypothesis 1:** *Psychological ownership positively influences frontline service innovation.*
- Hypothesis 2:** *Psychological safety positively influences frontline service innovation.*
- Hypothesis 3:** *Psychological safety positively influences creative self-efficacy.*
- Hypothesis 4:** *Creative self-efficacy positively influences psychological ownership.*
- Hypothesis 5:** *The relationship between psychological safety and psychological ownership is mediated by creative self-efficacy.*
- Hypothesis 6:** *Empowering leadership positively influences innovative organisational climate.*
- Hypothesis 7:** *Empowering leadership positively influences psychological safety.*
- Hypothesis 8:** *The relationship between empowering leadership and psychological safety is mediated by innovative organisational climate.*
- Hypothesis 9:** *Empowering leadership positively influences psychological ownership.*
- Hypothesis 10:** *Innovative organisational climate positively influences psychological ownership.*
- Hypothesis 11:** *The relationship between empowering leadership and psychological ownership is mediated by innovative organisational climate.*
- Hypothesis 12:** *Emotional intelligence positively influences frontline service innovation.*
- Hypothesis 13:** *Empowering job characteristics positively influence creative self-efficacy.*
- Hypothesis 14:** *Creative self-efficacy positively influences frontline service innovation.*
- Hypothesis 15:** *The relationship between empowering job characteristics and frontline service innovation is mediated by creative self-efficacy.*
- Hypothesis 16:** *Empowering job characteristics positively influence psychological ownership.*

**Hypothesis 17:** *Empowering job characteristics positively influence psychological safety.*

### **3.3 RESEARCH DESIGN AND PROCEDURE**

The proposed FLSI structural model (refer to Figure 2.5) displays the hypotheses pertaining to the path-specific relations between the various latent variables and FLSI. In order to empirically test the validity of the path-specific relationships, a plan or strategy, that will guide the research process, should be utilised for the evaluation of the research hypothesis. The nature of the study or the empirical evidence required, will dictate the research plan or strategy to follow. The following discussion will cover the research plan which will specifically refer to the research design, methodology, sampling procedure, data collection, measuring instruments and data analysis that the current researcher applied.

#### **3.3.1 Research Design**

Babbie and Mouton (2006) emphasise the essentiality of exploratory research studies as these often produce unique outcomes. However, in order to empirically examine the path-specific research hypotheses, the researcher needs a research plan which will subsequently affect the success of the research process.

The research design refers to the strategy that the researcher selects to integrate the various components of the study in a coherent and rational way. The research design provides a detailed outline or blueprint of the research process, which is used to direct data collection, test hypotheses, control variance and provide answers to the research initiating question (De Vaus, 2001; Babbie & Mouton, 2006). However, in order to collect unambiguous empirical evidence, which is required to evaluate the path hypotheses, the type of evidence required should be specified prior to the commencement of the study (Babbie & Mouton, 2001).

Kerlinger and Lee (2000) suggest that the researcher should distinguish between experimental and ex post facto (non-experimental) research approaches prior to the commencement of the study. Such a distinction will influence the choice of the research design selected for the research study at hand. Experimental designs allow the researcher to manipulate and control the independent variables in order to identify a causal relationship, while ex post facto correlational research is a more systematic empirical inquiry in which the researcher has less manipulative power over the independent variables. The inferences drawn from ex post facto research are predominantly based on interpretations, observations and interactions (Kerlinger & Lee, 2000).

The utilisation of non-experimental data pose three limitations, namely the inability to manipulate independent variables, the lack of choice to randomise, and the risk of incorrect interpretations (Kerlinger & Lee, 2000). Nonetheless, ex post facto research are still widely applied in the psychological and educational research spheres, as phenomena in these fields have already manifested and cannot be subjected to manipulation. Thus, an ex post facto correlational design was utilised for the purposes of the current research study. The relevant latent variables were measured on a single occasion as they are assumed to exist naturally within agricultural retail, trade and services organisations operating within the Western Cape.

### 3.3.2 Research Methodology

The survey method was applied in the current study. Observations, case studies and surveys are considered the typical way of conducting a descriptive research study. Babbie and Mouton (2001) are of the opinion that surveys are predominantly used in research where a sample of individual people serve as the unit of analysis.

Although survey researchers usually aim to draw inferences about the phenomena of whole populations on different levels of analysis, they tend to study samples from these populations on an individual level of analysis, as was the case with the current research study. The survey research method was applied to the current research study and due to practical considerations, the option of studying whole populations was excluded from the study.

The current researcher evaluated the strengths and weaknesses, based on Schlechter's (2005) overview, which are associated with the utilisation of a sample survey. The strengths include some of the following:

- **Cost-effectiveness:** The costs are reduced as the researcher is not required to collect data from the whole population, but only a sample thereof.
- **Generalizability:** Enables one to obtain a representative picture of the characteristics of the larger population (assuming that probability sampling is used).
- **Response burden:** Fewer individuals are required to participate in the survey.
- **Time:** Due to a reduced response rate required, less data and consequently reduced data processing is needed.
- **Control:** The smaller response group allows for improved monitoring and quality control.



The weaknesses of the sample survey research method are marked by the following:

- **Sampling variance is non-zero:** The data may not be accurate as the possibility exists that it does not provide a true reflection of the population in its entirety.
- **Detail:** The sample may be too small to represent population sub-groups or specific geographical areas.

Although the current researcher is cognisant of the inherent or probable drawbacks of the chosen research method, the strengths still appear to outweigh the weaknesses. Despite this she is positive that the employed methodology serves the objectives of the current study.

### 3.3.3 Sampling Procedure

The purpose of the current study is to gain clarity with regard to the variance in FLSI in FLE's in an agricultural retail, trade and services organisation within the Western Cape. It would be ideal to study the target population in its entirety, but due to the multiple limitations which this approach would present, the current researcher resorted to the practice of sampling. A sample should resemble the target population to such an extent as to enable the researcher to accurately generalise the results.

Thus, a representative sample should replicate the population characteristics in roughly the same proportion as they occur in the target population (Collins, Du Plooy, Grobelaar, Puttergill, Terre Blanche, Van Eeden, Van Rensburg, & Wigston, 2000). For the purposes of the current research study, the sampling population is defined as FLE's operating in the Western Cape. The underpinning theory, with regard to the sampling population that was selected for the current study, is that the psychological constructs that influence the FLSI displayed by individual FLE's are similar across agricultural retail, trade and services organisations within the Western Cape.

Two sampling procedures are typically applied in research, namely probability sampling (i.e. random, stratified, cluster and systematic sampling) and non-probability sampling (i.e. quota, purposive, accidental and snowball sampling). With probability sampling the elements in the population has a known chance of being selected as a subject for the sample whereas with non-probability sampling no probability of selection is attached (Sekaran, 2000).

As opposed to obtaining information from those that are conveniently available, Sekaran (2000) believes that at times it is necessary to gather the information required for the research

from predetermined target groups. With purposive sampling the researcher employs his or her judgement and careful consideration to select a distinctive group of participants, who are regarded eligible sources of information, from the sample population (Saunders, Lewis, & Thornhill, 2007). For the current research, the inclusion criterion is all employees who render a frontline service and engage in regular, to a certain extent, customer problem-solving. These roles included Retail Clerks, Shop Floor Assistants, Junior Managers Retail Store, and artisans (i.e. Fitter and Turner, and Agricultural Mechanic). The single participating agricultural retail, trade and services organisation was not truly selected by random. Due to the firm's geographical location and board of directors' willingness to participate in the research study, purposive sampling was the most viable option. The heterogeneity of the sample population (e.g. types of services rendered and ethnic variety) should reduce some of the possible bias.

Numerous scholars (De Vaus, 1996; Sekaran, 2000; Bryman & Bell, 2003) believe that a large sample size will enable the researcher to draw reliable inferences from the data that was collected. In this regard, a large sample size would decrease bias and meet the criteria as required by the analytical methods employed within the research. However, Bryman and Cramer (1998) argue that the size of the population and that of the sample should be related. Fridah (n.d.), reckons that the larger the population, the smaller the sampling ratio can be and vice versa. In other words, as the size of the population increases, it is possible to select a progressively smaller proportion of the elements.

Nevertheless, the literature provides general guidelines about a suitable sample size whilst performing Structural Equation Modelling (SEM). Hair, Anderson, Tatham, and Black (1998) believe that a sample size of less than 100 is rather small. Further to this they suggest that a sample between 100 and 200 is medium sized and a sample over 200 is regarded a large sample. Garson (2009) is, however, of the opinion that a sample size must exceed 100. Accordingly, most researchers who use SEM do not settle for a sample size that is smaller than 100 (El-Gohary, 2010) as this is generally regarded the practically acceptable size in this regard.

The application of Partial Least Squares (PLS) as opposed to Linear Structural Relations (LISREL) is recommended for small samples (Haenlein & Kaplan, 2004). The sample of the current study consisted of 191 participants with a response rate of 78% (i.e. 150 usable questionnaires). The sample size thus dictated the data analysis technique and therefore the researcher decided to apply PLS in the current research study.

### 3.3.4 Data Collection Procedure

The current researcher approached executive managers from three agricultural retail, trade and services organisations and requested participation in the research study. Only one Western Cape based organisation responded and provisionally agreed, subject to the submission of a formal proposal and ethical clearance obtained from the University of Stellenbosch, to participate. A few months later the researcher sent on a formal proposal and motivated the benefits of such research.

Once the research has been approved, the Director: Agri and Retail of this organisation electronically received a cover letter, an informed consent form to be signed by the organisation, an informed consent form to be distributed amongst the supervisors who will be evaluated by the participants, and proof of ethical clearance that was issued by the University of Stellenbosch. Emails and telephonic correspondence accompanied this documentation. Prior to the official commencement of the data collection, the Director: Agri & Retail was requested to return the signed informed consent forms before the data collection process could officially start. These documents provide written consent that the FLE's of this organisation may: *i) be invited to participate in the research study; and ii) evaluate their respective supervisors during the survey.*

The current researcher visited numerous retail stores in person and facilitated the briefing sessions herself. Due to the operational requirements of each store, only small groups of 1 to 6 individual participants could be released from their duties at a time. They were subsequently invited to attend a briefing session on the day on which the data was collected. During these briefing sessions the researcher gave the potential participants an overview of the research objectives, the data collection process and the utilisation of the data. Further to this she assured them of the study's compliance with the identified ethical directives and invited them to participate in the research study. Thereafter a short break followed and only those who wished to participate returned and completed the survey.

A self-administered paper-and-pencil survey that was intentionally developed for the purposes of the current research study (see Appendix A) were completed by the individual participants. Due to the educational level of the participants and Afrikaans being the language of preference amongst the agricultural communities, each item was translated from English to Afrikaans and the questionnaire displayed the original English item, as well as the Afrikaans translation thereof. The individual consent form formed part of the self-compiled questionnaire. The researcher was present during the assessments and available to answer and clarify any

questions or uncertainty which a participant might have had about an item. Although the assessment was not timed, the participants were given roughly one hour to complete the survey.

Once the data was successfully collected, it was subjected to numerous statistical analyses. Valuable inferences were made and conclusions drawn based on the these results.

### **3.4 ETHICAL CONSIDERATIONS**

As previously mentioned, when empirical behavioural research is conducted, individuals are most often the units of analysis. The researcher has the obligation to protect these individuals' right to dignity, safety and well-being and therefore must consider the potential ethical risks that the current research study may impose on the participant. However, no potential ethical risks or harm could be identified. Nevertheless, enough precautions were made in order to prevent any ethical violations relating to the participation of the agricultural retail, trade and services organisation and its respective FLE's.

Data collection only commenced after the study was ethically cleared by the Research Ethics Committee: Human Research of Stellenbosch University. Self-administered paper-and-pencil measuring instruments were utilised, whereof most are available in the public domain. None of the instruments used in the current research study has been classified by the Psychometrics Committee of the Professional Board for Psychology under the Health Professions Act (No. 56 of 1974) as psychological tests.

Further to this, in accordance with Chapter 5 of the Ethical Rules of Conduct for Practitioners, registered under the same act as referred to in the previous paragraph, the confidentiality and anonymity of the participating agricultural retail, trade and services organisation and its FLE's were protected throughout the research process. The respective consent forms, which the participating agricultural retail, trade and services organisation, the managers or supervisors to be evaluated and the FLE's completed prior to the commencement of data collection, clearly stipulated these provisions. Additionally, the researcher also communicated these provisions to the participating FLE's as part of her introduction at the data collection briefing session. Although the first section of the survey required the disclosure of biographical and employment information, the individual participant was not required to reveal his/her identity .

After completion of the survey, the researcher personally collected all the questionnaires. These completed questionnaires were always in her safekeeping and only her supervisor, the

statistician and she had access to the individual participants' responses. The participating agricultural retail, trade and services organisation was not granted access to any raw data, but instead received a comprehensive overarching feedback report upon completion of the research study.

Participation in the current research study was voluntary and permission was granted by completion of three different informed consent forms prior to commencement of the survey. The first consent form was supplied to the assigned contact person of the participating agricultural retail, trade and services organisation during the early stages of the research process for completion. This form specifically stipulated the purpose, objectives, the data collection method and procedure, confidentiality, the benefits and the potential risks of the intended research study. The second consent form was distributed to the supervisors who potentially were to be evaluated during the survey. These supervisors were thus presented with the opportunity to withdraw themselves from being evaluated by the participants of the study. Lastly, the third consent form was completed by each of the individual participants on the day on which they completed the self-administered paper-and-pencil survey. An opportunity for questioning with respect to the possible ethical concerns was given prior to the commencement of data collection on this day. The consent forms were available in English and Afrikaans to cater for the anticipated language diversity. Both these documents adhered to the provisions of Chapter 10 of the Ethical Rules of Conduct for Practitioners Registered under the Health Professions Act (56 of 1974).

Neither the agricultural retail, trade and services organisation nor the individual FLE's received any monetary incentive for participating. As previously mentioned, the current researcher provided the participating organisations with a comprehensive organisation specific feedback report and agreed to avail herself for a feedback session to both the management team and the participants of the participating organisation.

### **3.5 MEASURING INSTRUMENTS**

The availability and quality of measurement instruments will ultimately determine the current researcher's ability to operationalise the latent variables in the proposed *FLSI* structural model (refer to Figure 2.5). Seven measures were identified through a comprehensive literature review as suitable scales to utilise in the current research study. Some of the items of these measures were modified and some discarded to better tailor it for the current research study. Due to the lack of an extant measure for *FLSI*, an eighth measure was compiled by means of borrowing items from various extant measures and developing some new items in addition.

The items of the eight measuring instruments were translated to Afrikaans by a professional translator as to ensure that the questionnaire is available in English and Afrikaans. The content validity of the translated, Afrikaans items was tested by having a different translator translate these items back to English (refer to Appendix B). The current researcher compared the meaning of the translated English items to that of the original English items and concluded that the content validity of the Afrikaans items was satisfactory.

The composite questionnaire that was utilised for the current research study contained the following components: A written consent form that specifies the purpose and objectives of the study and information about the rights of the participant; and a biographical questionnaire and the eight measuring instruments that were utilised to operationalise the latent variables of the current study (refer to Appendix A). The eight measuring instruments will be elaborated upon in the subsequent paragraphs.

### **3.5.1 Frontline Service Innovation**

Due to the lack of extant measures for *FLSI*, the author borrowed items from various measures and supplemented the measure with a few items which she developed herself. The *FLSI* measure consists of the following three dimensions and contains 20 self-rating items that are anchored on a seven-point Likert scale (1 = strongly disagree to 7 = strongly agree). The dimensions and the number of items within each respective dimension are as follow: a) *Identifying Customers' Needs* (6 items); b) *Innovation* (5 items); and c) *Adaptive Service Offering* (9 items).

The first dimension, *Identifying Customers' Needs*, is defined as the FLE's ability to accurately and effectively delineate and interpret the customer's needs whilst engaging with him or her. The current researcher borrowed the first two items from the empathy scale of Wilder et al.'s (2014) measure. These items were adapted from McBane's (1995) study by the researcher. Due to the lack of additional suitable items for this dimension, the current researcher developed items 3, 4, 5 and 6. The following item is a sample item of this dimension: "During a service experience, I usually try to 'put myself in the customer's shoes'".

There does not seem to be a measure for innovation that focuses on the frontline context. Subsequently, the current researcher developed all the items for the second dimension, *Innovation*, of the *FLSI* measure and defines this dimension as the FLE's ability to find creative

solutions for his or her customers' problems. A sample item is: "I frequently come up with creative solutions to customers' problems".

The last dimension, *Adaptive Service Offering*, refers to the FLE's ability to adapt or change his or her service approach as to ensure he or she meets the customer's need or solves his or her problem. The current researcher borrowed and modified five items (items 12 to 16) of this dimension from Wilder et al.'s (2014) adaptive service offering scale which they originally adapted from Gwinner, Bitner, Brown, and Kumar. The last four items of this dimension, the current researcher borrowed and adapted from Sousa & Coelho (2009). Herewith a sample item from this scale: "I usually adapt the type of service to meet the unique needs of each customer."

As this instrument was compiled and developed specifically for the purposes of the current research study, the psychometric properties are unknown and will subsequently be revealed in the empirical psychometric analysis.

### **3.5.2 Psychological Ownership**

*Psychological Ownership* is a psychological phenomenon which denotes an individual's feelings of possessiveness towards a target (Van Dyne & Pierce, 2004). Within an organisational context, the individual's job is a natural target towards which feelings of ownership tend to develop (Brown, Pierce, & Crossley, 2014). This is referred to as job-based *Psychological Ownership* and this is also the construct that will be measured in the current study.

Van Dyne and Pierce (2004) developed and validated a measure for job-based *Psychological Ownership* which consists of six items. Brown et al. (2014) borrowed four individual referenced items from this measure with a Cronbach alpha of .93 and added two job specific items with a Cronbach alpha of .94 to steer away from a generalisation of feelings directed at the organisation per se.

In the current study the author utilised these six items from Brown et al. (2014) and measured them on a seven-point Likert Scale (1 = strongly disagree to 7 = strongly agree). Sample items include: "I sense that this is MY job," and "I feel a high degree of personal ownership for the work that I do".



### 3.5.3 Emotional Intelligence

The Schutte Emotional Intelligence Scale (SEIS) was employed to measure *Emotional Intelligence* in the current research study. Schutte, Malouff, Hall, Haggerty, Cooper, Golden, and Dornheim claim that the SEIS assesses “perception, understanding, expression, regulation and harnessing of emotion in the self and others” (Jonker & Vosloo, 2008, p. 24).

Ciarrochi, Chan, and Caputi state that the SEIS comprises of 33 self-rating items whereof three (5, 28 and 33) are reverse scored. These items are rated on a five-point Likert Scale (1 = strongly disagree to 5 = strongly agree) and a total score is derived by aggregating the item responses (Jonker & Vosloo, 2008). According to an internal consistency analysis a Cronbach alpha of .90 for the 33-item scale was found (Schutte, Malouff, Hall, Haggerty, Cooper, Golden, & Dornheim, 1998).

### 3.5.4 Empowering Job Characteristics

Hackman and Oldham's Job Diagnostic Survey (JDS) was developed to serve as a management tool with the purposes of diagnosing jobs and evaluating employee's responses about their jobs. They identified five job characteristics that will affect the employee's psychological states, which in turn will influence the extent to which the employee is satisfied and motivated on the job (Boonzaier & Boonzaier, 1994). These psychological states are known as experienced meaningfulness, experienced responsibility for work outcomes, and knowledge of results.

Hackman and Oldham argue that the job incumbent may experience meaningfulness in their work if three job characteristics (i.e. skill variety, task identity and task significance) are present. In the context of Hackman and Oldham's JDS these job characteristics are defined as follow: Skill variety is “the degree to which a job requires a variety of different activities in carrying out the work, which requires a number of different skills and talents of the employee”; task identity is “the degree to which the job requires completion of a ‘whole’ and identifiable piece of work – that is doing a job from beginning to end with a visible outcome”; and task significance is “the degree to which the job has a substantial impact on the lives or work of other people, whether in the immediate organi[s]ation or in the external environment” (Boonzaier & Boonzaier, 1994, p. 103).

The presence of autonomy in a job may affect the employee's “experience of responsibility for work outcomes” whereas feedback received whilst performing the job enhances the



employee's knowledge of results. These two job characteristics can be defined as follows: Autonomy is the extent to which the job makes provision for "substantial freedom, independence, and discretion by the employee in scheduling the work and in determining the procedures to be used in carrying it out". Feedback from the job itself on the other hand is "the degree to which performing the work activities required by the job results in the employee obtaining direct and clear information about the effectiveness of his or her performance" (Boonzaier & Boonzaier, 1994, pp. 102-103).

Due to the identification of some inconsistencies in the JDS's factor structure the Revised Job Diagnostic Survey (RJDS) was developed (Buys et al., 2007). Hence, the current researcher decided to utilise the RJDS to operationalise *Empowering Job Characteristics* in the current research study. This measure consists of five sections. Section one contains five items that are anchored on a seven-point Likert scale. The following is a sample item from this section: "How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing the work?" Only ratings 7, 4 and 1 of this scale provides a description of the rating (1 = very little to 7=very much), but the current researcher added descriptions for ratings 6, 5, 3 and 2 as well. Section two contains ten items which are also measured on a seven-point Likert scale (1 = very inaccurate to 7 = very accurate. "The job requires me to use a number of complex or higher-level skills" serves as a sample item for this scale. Section three consists of seven items that are also measured on a seven-point Likert scale (1 = strongly disagree to 7 = strongly agree). "My opinion of myself goes up when I do this job well" is a sample item from this section.

The next section, section four, has four items that are measured on a seven-point Likert scale (1 = extremely dissatisfied to 7 = extremely satisfied). The following is a sample item from this section: "The amount of personal growth and development I get in doing my job". The last section, section five, consists of four items that are anchored on a seven-point scale (1 = strongly disagree to 7 = strongly agree). "Most people in this job feel a great sense of personal satisfaction when they do the job well" serves as a sample item from this section. In conclusion the motivating potential score (MPS) was also computed by adding the average scores of each job characteristic together.

The alpha coefficients for the subscales of the RJDS range between .67 and .79. Although Nunnally demonstrated that a reliability coefficient of .7 is satisfactory, other authors have indicated that lower thresholds may at times (i.e. when a scale contains a limited number of items) be acceptable (Buys et al., 2007).

The 30-item Revised Job Diagnostic Survey (RJDS) was thus employed to operationalise *Empowering Job Characteristics* in this study. Instead of using the standard subscales, the researcher used the Simple Additive Index method to derive a *Motivating Potential Score* (MPS) and thereafter measured the Personal Outcomes which consist of: *Internal Work Motivation*, *General Job Satisfaction* and *Growth Motivation* (Buys et al., 2007). These four constructs served as the subscales of the *Empowering Job Characteristics* in the current study.

### 3.5.5 Innovative Organisational Climate

Amabile, Burnside, and Gyskiewicz's (1995) KEYS measurement is an instrument that assesses the climate for creativity. This measure was developed to deliver reliable and valid assessments of the perceptions of the organisational work environment which is expected to influence the generation and development of creative ideas (Swart, 2013).

Mathisen and Einarsen are of the opinion that this instrument proves to be of high scientific value as the peer-reviewed literature widely supports this (Swart, 2013). The original version of the KEYS instrument contains 78 items, but an abbreviated version with 24 items later emerged (Amabile, Conti, Coon, Lazenby, & Herron, 1996). The items of the abbreviated KEYS have been selected according to specific componential parameters of Amabile et al. (1995).

These componential parameters include: a) *the encouragement by the organisation*; b) *the encouragement by the hierarchy*; c) *the support of the group*; d) *sufficient resources*; e) *the challenge*; f) *autonomy in work*; g) *pressure*; and h) *organisational obstacles*. Every item in the abbreviated version has been selected with the purpose of obtaining specific information about the relevant construct within the work environment (Swart, 2013).

Twenty of the 24 items of the instrument measure the work environment and the remaining four measure the creativity and productivity of the relevant organisation. The work environment is evaluated by means of "stimulant scales" and "obstacle scales". Stimulant scales are those scales expected to be positively associated with creativity, whereas obstacle scales are those that are likely to be negatively associated with creativity (Rosello & Tran, 2010).

The researcher adapted the abbreviated KEYS measure for the purposes of the current study. The original, as well as the abbreviated version of the KEYS instrument, predominantly focus on the group level of analysis. Where the items referred to "team" she changed the word to either refer to the individual or the organisation. In addition, certain items were also adjusted

to complement the *FLSI* context as opposed to mere work creativity. Moreover, six items were removed due to its irrelevancy to the context of the current study. Thus, the adapted abbreviated KEYS measure that was applied in the current study contains 18 items.

Essentially, the abbreviated KEYS version assesses the perceived stimulants and obstacles to creativity within a work environment. Within this research study it was utilised to measure *Innovative Organisational Climate*, a hypothesised antecedent of *FLSI*. Accordingly, the construct of innovative organisational climate in the current study can be defined as a combination of contextual, work-related factors that facilitate or promote innovative results within an organisation.

According to Amabile (1996) the items of the abbreviated KEYS measurement instrument, as with the original version of the KEYS, are anchored on a four-point Likert scale. The purpose for the application of a four-point response scale was to avoid a midpoint and thus force respondents to keep away from a neutral default option.

The respondent is required to rate “how often true” a statement is of his/her current work environment (never or almost never = 1, sometimes = 2, often = 3, always or almost always = 4). The same response scale was applied in the current study.

According to Rosello and Tran’s (2010) study the Cronbach alpha of the internal scales of the abbreviated KEYS range from .61 to .8 with a median internal reliability of .7. Three of the dimensions of the abbreviated version of the KEYS are below .7, which may be a cause for concern, but acceptable scores were obtained in the test-retest reliabilities of the dimensions included in the measure. Whether the adaptation and elimination of items of the abbreviated KEYS will have any psychometric implications in the current research study, will be uncovered in the forthcoming empirical psychometric analysis.

### **3.5.6 Psychological Safety**

In the current study *Psychological Safety* is defined as the “extent to which members of an organi[s]ation feel psychologically safe to take risks, speak up and discuss issues openly” (Kark & Carmeli, 2009, p. 793). This definition thus refers to the individual’s perceptions of the likely consequences of interpersonal risk-taking within his or her organisation (Kark & Carmeli).

Edmondson's seven-item scale of psychological safety is most frequently applied in measuring this construct in extant research. It was designed with the purpose of measuring team psychological safety (Chen et al., 2015). Kark and Carmeli (2009) modified these seven items in order to utilise it on organisational level.

The Kark and Carmeli version was applied in the current study. This scale contains six, self-rating items which are anchored on a seven-point Likert Scale (1 = strongly disagree to 7 = strongly agree) with a Cronbach alpha of .76. The following items serve as sample items of this scale: "It is safe to take a risk in this organisation", and "It is difficult to ask other members of this organisation for help".

### **3.5.7 Creative Self-Efficacy**

Tierney and Farmer developed a creative self-efficacy measure which was employed in the current study. They defined creative self-efficacy "as the belief one has the ability to produce creative outcomes" (Tierney & Farmer, 2002, p. 1138).

The measurement scale consists of three, self-rating items that are rated on a seven-point Likert scale (1 = strongly disagree to 7 = strongly agree). The measure includes the following sample item: "I have confidence in my ability to solve problems creatively". Tierney and Farmer (2002) reported a reliability coefficient of .83 within a manufacturing environment and of .87 within an operational setting.

### **3.5.8 Empowering Leadership**

The construct of *Empowering Leadership* in the current research study is defined as the FLE's perception that his or her direct manager or supervisor gives them freedom to seek and implement creative solutions within the frontline service context. In order to measure this construct the current researcher borrowed and adapted a five-item empowerment scale from Babakus, Yavas, Karatepe, and Avci (2003), which they in turn had adapted from Hayes (1994). The items of their empowerment scale do not specifically refer to the extent to which the employee's supervisor or manager empowers him or her to solve their customers' problems. Subsequently, the current researcher adapted all five items accordingly as to ensure that it measures empowering leadership as opposed to merely empowerment. Each item is measured on a five-point scale where 5 = strongly agree and 1 = strongly disagree. "My supervisor or manager empowers me to solve customer problems" serve as a sample item of this scale.

Babakus et al. (2003) reported a coefficient alpha of .81 on their empowerment scale, which is indicative of rather strong internal consistency reliability. Before they conducted the reliability assessment, this measurement scale was subjected to a series of exploratory and confirmatory factor analyses in order to attend to the issues of dimensionality, convergent and discriminant validity. Whether the current researcher's adaptations to the items will implicate the psychometric properties of this measurement scale will be discussed in the empirical psychometric analysis.

### **3.6 DATA ANALYSIS**

The research design is determined by the research initiating question, whilst the statistical analysis technique in turn is determined by the research design. The complexity and exploratory nature of the substantive research hypothesis predominantly dictated the utilisation of Partial Least Squares Structural Equation Modelling (PLS-SEM). The following discussion aims to motivate the selection and application of this specific data analysis technique and explains the preliminary statistical analyses procedures required.

#### **3.6.1 Preliminary Statistical Analyses Procedures**

Prior to performing PLS-SEM, which involves the testing of the measurement (outer) and structural (inner) models, certain preceding statistical analyses are required. These include the treatment of missing values and item analysis, which will provide an indication of the psychometric properties of the measurement tools used during the current research study.

##### **3.6.1.1 Missing values**

Missing values is a common occurrence during the collection of data. This is due to either non-response (i.e. intentional or unintentional omission of items) or the absenteeism of individual participants (Mels, 2003). Missing values could prove problematic in that it may compromise the sample's representativeness of the intended population. One should therefore address this issue in fitting ways prior to the commencement of any statistical analyses (Theron, 2013).

There are various methods in which missing values can be rectified. These methods include "list-wise deletion, pair-wise deletion, imputation by matching and multiple imputation" (Aucamp, 2014, p. 46). To resolve the issue of missing values in the current research study, the researcher decided to apply the method of missing data imputation for those cases where there were limited omitted responses. Thereafter she applied the method of casewise deletion.

### 3.6.1.2 Item analysis

A measurement instrument usually comprises of several items and is designed with the purpose to operationalise the latent variables of the structural model. These measures contain items which aim to elicit a response from the respondent to, with specific reference to the behavioural sciences, determine the perception of the behavioural manifestation in the underlying latent variable. Some latent variables are constitutively defined in terms of two or more subscales or dimensions and each subscale is measured by a separate set of items.

Item analysis is a technique which can assist the researcher to determine whether the items consistently represent the latent variable and if the item explains a significant proportion of the variance in the latent variable (Theron, 2013). The inclusion of certain items in a scale may affect the overall reliability of that scale and thus item analysis was performed to evaluate the psychometric properties of the scale.

Classical measurement theory item analysis was performed on the items of each subscale and the following statistical criteria were used to identify poor items: A Cronbach Alpha of  $>.7$ ; corrected item-total correlations  $>.3$ ; squared multiple correlations  $>.3$ ; extreme means or small standard deviations; and a noticeable increase in alpha, in comparison to the relevant scale's observed Cronbach Alpha, if an item is deleted (Theron, 2015). In the case where items negatively influenced the reliability of a construct, the researcher did not remove these poor items, but discussed these implications under the limitations of the current study.

### 3.6.2 Structural Equation Modelling

Regression-based data analysis techniques, or also referred to as first-generation techniques, pose multiple limitations. These include: *i) the inability to propose a simple model structure; ii) the assumption that all variables are observable; and iii) the inference that all variables are measured without error.* In order to overcome the limitations posed by first-generation techniques, more researchers are opting for second-generation data analysis techniques (Haenlein & Kaplan, 2004).

SEM, a second-generation multivariate data analysis technique, has gained popularity over the past few years. This technique can simultaneously analyse multiple variables (Hair, Hult, Ringle, & Sarstedt, 2014) and allows the researcher to measure unobservable variables by means of indicators also referred to as items, manifest variables or observed measures, as well as to explicitly model measurement error for the observed variables (Haenlein & Kaplan,

2004). SEM is very useful for the exploration and the development of theories plus the confirmation of such theories and constructs.

Two approaches for the estimation of the parameters of the SEM exist, namely the Covariance Based (CB-SEM) and the Partial Least Squares (PLS-SEM) approach. CB-SEM is typically the preferred approach as it applies hard-based modelling which is associated with maximum likelihood estimation. Whilst, the second approach PLS-SEM is a variance based approach also referred to as a soft-modelling technique (Henseler, Ringle, & Sinkovics, 2001).

The key difference between these two approaches is that CB-SEM is used to confirm or reject theories whereas PLS-SEM is used to explain the variance in endogenous variables and is often utilised to test theories in exploratory research.

### **3.6.2.1 Partial least square analysis (PLS-SEM)**

PLS-SEM path modelling is often the preferred statistical analysis technique for exploratory research due to its strong exploration, as well as prediction, capability. As mentioned, this technique is used for the development of theories by testing and validating exploratory models and provides explanations for endogenous constructs which makes it ideal for prediction-oriented research (Henseler et al., 2001). The PLS-SEM path model comprise of two layers: *i) an inner layer which demonstrates the relations between the latent variables;* and *ii) an outer layer which demonstrates the relation between the latent variables and the manifest variables* (Hair et al., 2014).

The emphasis of PLS-SEM is more on prediction as opposed to explanation and is thus considered ideal for studies that seek to identify the antecedents of a given variable. In comparison to CB-SEM, PLS-SEM does not employ maximum likelihood estimation in order to estimate the fit of the proposed model. Instead, PLS-SEM, which is an ordinary least squares regression-based technique, utilises the applicable dataset to estimate path relationships by means of maximising the variance explained in the endogenous variables and minimising the error terms, or also referred to as the residual variance (Hair, Ringle, & Sarstedt, 2011). Based on the aforementioned approach, PLS-SEM is regarded a more lenient method in order to determine the prediction of the variables. Its accuracy pertaining to parameter estimation enables the researcher to determine a statistically significant relationship between two latent variables which is in reality also significant in the population (Hair et al., 2011). In summary, the main difference in the two approaches is that the model fit of CB-SEM reveals the discrepancy between the empirical and the theoretical model, whilst



the PLS-SEM indicates the discrepancy between the observed estimated values of the endogenous variables and the values predicted by the proposed model (Hair et al., 2014).

Non-parametric bootstrapping is a procedure that is used during PLS-SEM hypothesis testing when it is impossible to make parametric inferences or when the calculation of standard errors that entail complicated formulas is required. A bootstrap sample is developed by means of repetitive random sampling with replacement from the initial sample as to acquire the mean value and the standard error for each path model coefficient.

In the event that a bootstrapping confidence interval of an estimated path coefficient excludes zero, the null hypothesis will be rejected - this is indicative of a significant relationship between the hypothesised variables (Hair et al., 2011).

The advantage of PLS-SEM algorithm is that it calculates the construct scores as precise linear combinations of related observed manifest/indicator variables and thus utilises all the variance in these indicators in order to explain the endogenous variables. On the other hand, researchers warn against PLS-SEM bias which tends to derive from the fact that latent variables are aggregates of observed manifest variables. It is considered normal for indicators to have measurement error, but when the measurement error is detected in the latent variables (as with PLS-SEM) it may lead to bias in the model estimates (Hair et al., 2014). Consequently, the true path model relationships tend to be underestimated whereas the measurement model's parameters are inclined to be overestimated. However, Hair et al. (2014) are of the opinion that such bias only tends to affect estimates in research studies with small sample sizes and a high level of model complexity. Accordingly, one can deduce that PLS-SEM bias has little influence when the sample size is large and the number of indicators per latent variable is increased as to reflect the true values of latent variables (Hair et al., 2011). Irrespective of the PLS-SEM method bias, it is still widely regarded a useful and effective technique that can be applied to a wide spectrum of research studies – specifically those with smaller sample sizes (Henseler, Ringle, & Sinkovics, 2009).

In general, Henseler et al. (2009) argue that researchers prefer to use PLS-SEM for some or all of the following reasons:

- It is ideal for explanatory research or if the research study is an extension of an existing structural theory.
- PLS-SEM provides latent variable scores which can be measured by one or several indicators or manifest variables.



- This technique can estimate extremely complex models with numerous latent and manifest variables.
- PLS-SEM can be applied to small samples and can thus supply estimates of parameters of very small datasets.
- PLS-SEM path modelling makes less rigorous assumptions about the distribution of variables and error terms.
- It can test reflective as well as formative measurement models.

The nature of the current research study, exploring the antecedents of service innovation, has set the stage for the utilisation of PLS-SEM. The exploratory and predictive qualities of PLS-SEM thus motivated the application thereof. Moreover, the smaller sample size and complex measurement model, with a fairly large number of latent and manifest variables, further reinforced the researcher's choice in this regard.

### **3.7 CHAPTER SUMMARY**

This chapter provided an overview of the methodological approach that was selected and employed throughout the current research study.

In brief, an ex post facto research design, for the collection of data, was followed. Non-probability, purposive sampling was utilised to select a suitable sample group. Data of a quantitative nature was collected from FLE's, who work within the various divisions of an agricultural retail, trade and services organisation, by means of a self-administered paper-and-pencil survey. The various instruments that were included in the composite survey was the Psychological Ownership Questionnaire (Brown et al., 2014); an adapted version of Edmondson's Psychological Safety Scale (Kark & Carmeli, 2009); a self-efficacy measure (Tierney & Farmer, 2002); the SEIS (Jonker & Vosloo, 2008; Schutte et al., 1998); a *FLSI* measure; the Revised Job Diagnostic Survey (Buys et al., 2007 ); an adapted version of the abbreviated KEYS (Amabile, 1996) and; an adapted version of the Empowerment Scale (Babakus et al., 2003).

In conclusion, the data was analysed, and the proposed relationships were evaluated by means of item analysis and partial least square path analysis.

## CHAPTER 4

### RESULTS

#### 4.1 INTRODUCTION

In this chapter the statistical results that were obtained by means of various statistical analyses will be presented and discussed at an initial concrete level. Chapter 5 will serve as a comprehensive discussion and interpretation of the results. Firstly, a presentation of the sample demographics is provided, which is followed by reliability (item) analyses that were performed in order to determine the internal consistency of the measuring instruments. Thereafter, the measurement model was evaluated by means of Partial Least Squares (PLS) and where necessary, Linear Structural Relations (LISREL), and the structural model by means of PLS.

The evaluation of the measurement model entailed the inspection of the composite reliability, Average Variance Extracted (AVE), discriminant validity and the outer loadings. The evaluation of the structural model incorporated the evaluation of the Variance Inflation Factor (VIF), the R-square values and path coefficients.

#### 4.2 SAMPLE DESCRIPTIVE STATISTICS

A compilation of consent forms and questionnaires were physically distributed to 191 volunteering participants, during numerous facilitated sessions at various retail branches, in one leading agricultural organisation in the Western Cape. One hundred and fifty (150) useable questionnaires were returned (a response rate of 78%).

Table 4.1 provides the regional demographics of the Economically Active Population (EAP) within the Western Cape. People between the ages of 15-64 years, who are either employed or unemployed (who are actively seeking employment) are included in the EAP.

These statistics show that nearly half of the EAP within the Western Cape consist of people from the so-called coloured group and more than a third from the black African group. The white population constitutes only fifteen percent and the Indian population one percent of the provincial EAP.

Table 4.1  
*Western Cape EAP by Population Group/Race and Gender*

Gender	Race				TOTAL
	Black (African)	Coloured	Indian	White	
Male	19.3%	25.4%	0.6%	7.7%	53%
Female	17.3%	22.2%	0.4%	7.2%	47%
<b>TOTAL</b>	<b>36.6%</b>	<b>47.6%</b>	<b>1%</b>	<b>14.9%</b>	100%

*Note.* From Statistics South Africa, Quarterly Labour Force Survey, Q2 2018.

Based on the descriptive statistics, presented in Table 4.2, the largest portion (79.5%) of the sample consisted of male participants and the majority (64%) is from the coloured group. A comparison of Tables 4.1 and 4.2 reveals that the sample statistics in Table 4.2 are not well-aligned with the provincial EAP statistics. The males, as well as the coloured and white ethnic groupings are overrepresented, and the black African individuals are underrepresented when compared to the provincial figures. Further to this, more than a third of the sample group fell within the 31-40 years age group and grade 12 is the highest level of education for half (50%) of the participants. Although 96% of the participants speak Afrikaans at home only 79% exclusively utilised the Afrikaans questionnaire upon completion.

Table 4.2  
*Sample Descriptive Statistics*

Item	Category	Frequency	%
<b>Age</b>	18-30 years	46	30.5
	31-40 years	52	34.5
	41-50 years	37	25
	51-60 years	13	9
	Unknown	2	1
<b>Gender</b>	Male	119	79.5
	Female	29	19.5
	Unknown	2	1

Table 4.2  
*Sample Descriptive Statistics (Continued)*

Item	Category	Frequency	%
<b>Highest qualification obtained</b>	Grade 8 or less	6	4
	Grade 9 - 11	22	15
	Grade 12	76	50
	National certificate	28	19
	Diploma	17	11
	Unknown	1	1
<b>Language</b>	Afrikaans	145	96
	Xhosa	1	1
	English	2	1
	Zulu	1	1
	Unknown	1	1
<b>Ethnicity</b>	Black (African)	6	4
	Coloured	96	64
	White	37	25
	Unknown	11	7
<b>Language of completion of questionnaire</b>	English	10	7
	Afrikaans	119	79
	English & Afrikaans	17	11
	Unknown	4	3

### 4.3 EVALUATION OF THE MEASUREMENT MODEL

Reliability (item) analysis was utilised to evaluate the psychometric properties of the measurement scales.

#### 4.3.1 Reliability Analysis

Item analysis was performed in order to determine the internal consistency amongst the items of the different scales that were used to measure the latent variables. George and Mallery (2003) recommend the following reliability criteria: Cronbach alphas  $\geq .9$  – excellent, between .89 and .8 – good, between .79 and .7 – acceptable, between .69 and .6 – questionable, between .59 and .5 – poor, and  $< .5$  – unacceptable. In the current study Cronbach alphas of .7 and higher were regarded acceptable (George & Mallery).

The average inter-item correlation is indicative of the consistency of the items of the relevant scale. According to Cohen (1988) an average inter-item correlation between .1 and .29 is weak, between .3 and .49 is medium and between .5 and 1 is strong. An average inter-item correlation of .3 and higher was considered satisfactory for the purposes of the current study (Cohen).

The items of each scale and subscale of the measuring instruments were subjected to reliability analysis. The psychometric properties of the different scales are presented in Table 4.3 below. This table displays the number of items, mean, standard deviation, average inter-item correlation and standardised Cronbach alpha of each scale and subscale.

Table 4.3  
*Summarised Reliability Analysis of Subscales*

Latent Variable	Subscale	Number of Items	Mean	Standard Deviation	Average Inter-Item Correlation	Standardised Chronbach Alpha
<b>Frontline Service Innovation</b>	Identifying Customers Needs	6	37.60	3.42	.28	.70
	Innovation	5	29.67	4.34	.40	.77
	Adaptive Service Offering	9	56.42	5.61	.30	.79
<b>Psychological Ownership</b>		6	36.13	7.66	.61	.90
<b>Emotional Intelligence</b>		33	132.51	11.89	.15	.85
<b>Empowering Job Characteristics</b>	Motivating Potential	15	86.67	14.51	.46	.93
	Internal Work Motivation	6	36.20	5.31	.37	.78
	General Job Satisfaction	5	25.74	5.94	.30	.66
	Growth Satisfaction	4	22.48	4.58	.57	.84
<b>Innovative Organisational Climate</b>	Stimulant	10	25.42	5.57	.32	.82
	Obstacles	4	10.71	1.97	-.08	.25
	Criterion	4	11.26	2.55	.44	.75
<b>Psychological Safety</b>		6	25.68	5.71	.16	.52
<b>Creative Self-Efficacy</b>		3	18.25	2.74	.55	.78
<b>Empowering Leadership</b>		5	27.44	6.74	.57	.86

Based on the values in Table 4.3, not all scales and subscales have Cronbach alphas equal to or higher than the .7 reliability limit. *General Job Satisfaction*, a subscale of the *Empowering Job Characteristics* scale, achieved questionable (.66) reliability. Moreover, the *Obstacles* subscale of the *Innovative Organisational Climate* fell within the unacceptable range (.25) and the *Psychological Safety* scale within the poor (.52) range. The remainder of the scales and subscales showed internal reliability as the Cronbach alphas ranged from .7 to .93.

The majority of the average inter-item correlations of the various scales and subscales indicated that the item correlations (.3 to .61) were within acceptable limits. Thus it is evident that most of the items consistently measured the same construct, whilst still retaining its discriminant validity as the inter-item correlations weren't too high. *Identifying Customers' Needs* (.28), a subscale of *Frontline Service Innovation*, *Emotional Intelligence* (.15), and the *Obstacles* subscale (-.08) of the *Innovative Organisational Climate* scale, as well as the *Psychological Safety* (.16) scale, did not meet the inter-item correlation reliability criteria.

In terms of the evidence presented above five problematic instruments were flagged for further investigation. All other items and instruments seemed satisfactory upon comparison with the overall reliability criteria.

#### **4.3.1.1 Frontline service innovation**

The current researcher has tailormade a *Frontline Service Innovation* scale to operationalise this construct for the purposes of this study. She borrowed and amended items from various sources and the final scale consists of three subscales: i.e. *Identifying Customers' Needs*, *Innovation* and *Adaptive Service Offering*. *Frontline Service Innovation* was measured with 20 items.

All the subscales of the *Frontline Service Innovation* scale obtained acceptable, based on George and Mallery's (2003) reliability coefficient parameters, Cronbach alpha scores that range from .7 to .79. The general reliability of the subscales is further supported by the average inter-item correlations. The inter-item correlations for *Innovation* (.4) and *Adaptive Service Offering* (.3) fall within Cohen's (1988) acceptable inter-item correlation limits. Although the average inter-item correlation for *Identifying Customers' Needs* (.28) only slightly missed the aforementioned limits, it will be further assessed upon the evaluation of the measurement model.

It appeared that the removal of any of the items from these subscales will not increase the relevant Cronbach alphas. Nonetheless, these reliability values are considered satisfactory for the purposes of the current study.

#### **4.3.1.2 Psychological ownership**

Six items were utilised to measure *Psychological Ownership* in this study. This scale achieved a Cronbach alpha of .9 which is considered an excellent reliability measure according to George and Mallery (2003). Moreover, it appears that the Cronbach alpha of this scale will not improve upon the removal of any of the items.

Based on Cohen's (1988) reliability criteria the average inter-item correlation of .61 will be rated as strong, which provides further support for the overall reliability of this scale.

#### **4.3.1.3 Emotional intelligence**

Schutte's 33-item Emotional Intelligence Scale (SEIS) was utilised to measure the construct of *Emotional Intelligence* in the current research study. This scale obtained a good, as per George and Mallery's (2003) reliability standards, Cronbach alpha value of .85. It seems that the Cronbach alpha will not increase if any of the extant items are to be removed.

The average inter-item correlation for the *Emotional Intelligence* scale did not perform that well. A weak (Cohen, 1988) average inter-item correlation of .15 was obtained for this scale which indicates that the items did not consistently measure the same construct. The current researcher provisionally decided to retain this scale as the overall reliability statistics seemed satisfactory. However, this will be further assessed upon the evaluation of the measurement model.

#### **4.3.1.4 Empowering job characteristics**

The 30-item Revised Job Diagnostic Survey (RJDS) was employed to operationalise *Empowering Job Characteristics* in this study. The researcher used the Simple Additive Index method to derive at a *Motivating Potential Score* (MPS) and thereafter calculated the Personal Outcomes which constitute of: *Internal Work Motivation*, *General Job Satisfaction* and *Growth Motivation*. These four constructs served as the subscales of the *Empowering Job Characteristics* in the current study.

All these subscales, except for *General Job Satisfaction* (.66), achieved Cronbach alpha's that exceed George and Mallery's (2003) acceptable reliability limit of .7. None of the Cronbach alphas of these subscales seem to improve upon the removal of any items.

The inter-item correlations of *Motivating Potential* (.46), *Internal Work Motivation* (.37) and *General Job Satisfaction* (.3) fell within Cohen's (1988) medium strength inter-item correlation parameters whereas *Growth Satisfaction* (.57) fell within the strong category in this regard.

Despite the questionable Cronbach alpha of *General Job Satisfaction*, the researcher decided to provisionally retain this subscale and subject it to further assessment upon the evaluation of the measurement model.

#### **4.3.1.5 Innovative Organisational Climate**

The current researcher adapted Amabile's (1996) abbreviated KEYS to measure *Innovative Organisational Climate* on an individual level instead of on the intended team or group level. This adapted version contained 18 items as opposed to the original 24 items. Despite the adjustments to the content and number of items the current researcher initially retained and utilised the three subscales, *Stimulant*, *Obstacles* and *Criterion*, of the original abbreviated KEYS.

The *Stimulant* and *Criterion* subscales adhered to George and Mallery's (2003) reliability criteria with Cronbach alphas of .82 and .75 respectively. In contrast, the *Obstacles* subscale achieved an unacceptable Cronbach alpha of .25. The results suggested that the Cronbach alpha of the *Stimulant and Criterion* subscales will improve to .83 and .78 respectively upon the removal of a single item on each of these subscales. The current researcher took cognisance of these improvements but decided to retain these items as Cronbach alphas of .82 and .75 are still good and acceptable in terms of the reliability criteria. The results further indicated that the Cronbach alpha of the *Obstacles* subscale will also increase in the event of deletion of the last item. However, this increase is still not high enough to bring the reliability coefficient close to or beyond the acceptable limits.

The average inter-item correlation of the *Stimulant* (.32) and *Criterion* (.44) subscales appear to be of medium strength as per Cohen's (1988) inter-item correlation parameters. The average inter-item correlation of the *Obstacles* (-.08) subscale on the other hand seems problematic. Based on the overall poor reliability statistics of the *Obstacles* subscale, the current researcher decided to remove this subscale from all further analyses. This decision



was corroborated by a LISREL analysis of the measurement model for *Innovative Organisational Climate* (see Table 4.8).

#### **4.3.1.6 Psychological safety**

*Psychological Safety* was measured by means of Kark and Carmeli's (2009) modified seven-item scale in the current study. The reliability analysis shows that this scale, with a Cronbach alpha of .52, falls within George and Mallery's (2003) poor classification in terms of internal consistency. According to the results the Cronbach alpha may improve to .53 upon the elimination of either one of two different items on this scale. This improvement is not substantial and neither of the items was thus removed in the current research study. The average inter-item correlation (.16) also performed rather poorly and was classified as "weak" against Cohen's (1988) classification.

The researcher provisionally considered the removal of this scale from the structural model pending further evaluation of the measurement model.

#### **4.3.1.7 Creative self-efficacy**

*Creative Self-Efficacy* was operationalised by means of Tierney and Farmer's (2002) three-item Creative Self-Efficacy measure and obtained a Cronbach alpha of .78. This reliability coefficient is regarded as acceptable in accordance with George and Mallery's (2003) guideline. The average inter-item correlation of .51 is regarded as strong (Cohen, 1988) which further supports the overall reliability of this scale.

#### **4.3.1.8 Empowering leadership**

Babakus et al.'s (2003) five-item scale was modified by the current researcher as to measure *Empowering Leadership* in this study. A Cronbach alpha of .86, which proves to be "good" in terms of George and Mallery's (2003) internal reliability criteria, was achieved. The strong average inter-item correlation of .57 further supported the reliability of this scale.

### **4.4 PARTIAL LEAST SQUARE (PLS) STRUCTURAL EQUATION MODELLING (SEM) ANALYSIS**

PLS SEM is a two-step procedure. It entails firstly, the evaluation of the measurement model and secondly, the evaluation of the structural model – that is the evaluation of the path analyses and the matching hypotheses (Chin, 1998; Hair Jr, Hult, Ringle, & Sarstedt, 2017). The current researcher thus inspected the reliability of each latent variable's scale or subscale

and subsequently the path coefficients as to determine whether there are significant paths between variables.

#### 4.4.1 Evaluation and Interpretation of the Measurement Model

The psychometric properties of the various measures of the latent variables of the measurement model were determined by means of the evaluation of the composite reliability, the Average Variance Extracted (AVE), the Heterotrait-Monotrait (HTMT) ratio and outer loadings. Where necessary LISREL was utilised to assess the goodness-of-fit of the measurement model.

##### 4.4.1.1 Composite reliability

The composite reliability score is indicative of reliability of the latent variable scales. Generally, the criterion for a satisfactory level of composite reliability is set at .7 and higher (Hair Jr et al., 2017). From the table below (Table 4.4) it appears that all the composite reliabilities of the latent variables are above .7 and adhere to Hair Jr et al.'s (2017) satisfactory guideline.

Table 4.4  
*Composite Reliability Values all Subscales*

Scale	Original Sample	Confidence Intervals	
		2.50%	97.50%
Frontline Service Innovation	.87	.82	.91
Psychological Ownership	.93	.88	.96
Emotional Intelligence	.87	.82	.89
Empowering Job Characteristics	.90	.87	.93
Innovative Organisational Climate	.88	.83	.92
Psychological Safety	.71	.55	.77
Creative Self-Efficacy	.88	.83	.92
Empowering Leadership	.89	.85	.92

##### 4.4.1.2 Average variance extracted

The extent to which a measure positively correlates with another similar measure (i.e. a measure of the same construct) can be detected from its convergent validity. The convergent validity is determined by conducting an evaluation of the outer loadings of the indicator variables and the Average Variance Extracted (AVE). High AVE values are indicative that related indicator variables may share too much commonality (Hair Jr et al., 2017). AVE is typically useful to determine the convergent reliability at construct level and measures the

amount of variance that is captured by a construct in comparison to the amount of variance caused by measurement error (Fornell & Larcker, 1981). AVE values of .5 and higher indicate that the indicator variables are indeed measuring the construct it is intended to measure (i.e. the construct explains more than half of the variance of its indicator variables). AVE values lower than .5 suggests that most of the variance is ascribed to measurement error in the items as opposed to the variance explained by the relevant construct (Hair Jr et al., 2017). The AVE score for each scale in the current study is displayed in Table 4.5 below.

The information in Table 4.5 shows that the AVE scores of most of the latent variables are well above the .5 threshold. The inference can thus be drawn that these constructs explained more than 50% of the variance in the indicators. For those latent variables that did not meet the .5 threshold, *Emotional Intelligence* and *Psychological Safety*, more of the variance is explained by measurement error in the items than the variance in the construct. This is considered a limitation in the current study or more specifically a constraining factor in the measurement model. Nevertheless, low AVE values are generally not an unusual phenomenon in research.

The conclusion can be drawn that these latent variables that do not meet the .5 criterion do not explain enough variance by means of the items that were utilised to measure the relevant construct.

Table 4.5  
*Average Variance Extracted (AVE)*

Scale	Original Sample	Confidence Intervals	
		2.50%	97.50%
Frontline Service Innovation	.69	.61	.76
Psychological Ownership	.69	.57	.80
Emotional Intelligence	.20	.16	.24
Empowering Job Characteristics	.70	.62	.76
Innovative Organisational Climate	.79	.71	.86
Psychological Safety	.30	.24	.37
Creative Self-Efficacy	.71	.63	.8
Empowering Leadership	.63	.53	.70

#### 4.4.1.3 Discriminant validity

Discriminant validity is achieved when the measures of constructs that, on a theoretical basis, are not supposed to be highly related to one another, are indeed found not to be highly correlated (Hubley, 2014). Discriminant validity thus determines the true distinctiveness of one variable from others in the measurement model (Hair Jr et al., 2017). It assesses whether constructs are independent or whether there is a margin of overlap between the constructs.

The Heterotrait-Monotrait (HTMT) ratio assesses the average correlation among the indicator variables across constructs, relative to the average correlation among indicators variables within the same construct. This is to determine how strongly the indicators or items of the various measures of the latent variables correlate with one another. A HTMT value of  $<1$  indicates that the true correlations with the constructs differ. If the HTMT value exceeds this threshold then one may conclude that there is a lack of discriminant validity. Moreover, the bootstrapping method, which was applied in this study, makes provision for constructing confidence intervals for the HTMT ratio. The same threshold applies for the confidence interval as for the HTMT value. Thus, if the confidence interval value is  $\geq 1$  then it is bound to lack discriminant validity (Alarcón & Sánchez, 2015). The HTMT ratios for all the constructs are displayed in Table 4.6.

Table 4.6  
*Heterotrait-Monotrait (HTMT) Ratios*

Construct	Original Sample	Confidence Intervals		Discriminate
		2.50%	97.50%	
Frontline Service Innovation -> Creative Self-Efficacy	.62	.51	.75	yes
Frontline Service Innovation -> Emotional Intelligence	.74	.60	.85	yes
Frontline Service Innovation -> Empowering Job Characteristics	.55	.37	.72	yes
Frontline Service Innovation -> Empowering Leadership	.42	.23	.64	yes
Psychological Ownership -> Creative Self-Efficacy	.28	.13	.52	yes
Psychological Ownership -> Emotional Intelligence	.34	.31	.55	yes
Psychological Ownership -> Empowering Job Characteristics	.78	.64	.90	yes
Psychological Ownership -> Empowering Leadership	.37	.22	.58	yes
Psychological Ownership -> Frontline Service Innovation	.38	.20	.62	Yes
Psychological Ownership -> Innovative Organisational Climate	.35	.15	.59	yes
Emotional Intelligence -> Creative Self-Efficacy	.49	.38	.67	yes
Empowering Job Characteristics -> Creative Self-Efficacy	.35	.17	.57	yes
Empowering Job Characteristics -> Emotional Intelligence	.41	.36	.57	yes

Table 4.6  
*Heterotrait-Monotrait (HTMT) Ratios (Continued)*

Construct	Original Sample	Confidence Intervals		Discriminate
		2.50%	97.50%	
Innovative Organisational Climate -> Creative Self-Efficacy	.39	.19	.63	yes
Innovative Organisational Climate -> Emotional Intelligence	.31	.28	.53	yes
Innovative Organisational Climate -> Empowering Job Characteristics	.66	.46	.82	yes
Innovative Organisational Climate -> Empowering Leadership	.54	.34	.73	yes
Innovative Organisational Climate -> Frontline Service Innovation	.32	.13	.56	yes
Psychological Safety -> Creative Self-Efficacy	.28	.18	.51	yes
Psychological Safety -> Emotional Intelligence	.48	.48	.70	yes
Psychological Safety -> Empowering Job Characteristics	.65	.47	.81	yes
Psychological Safety -> Empowering Leadership	.53	.40	.72	yes
Psychological Safety -> Frontline Service Innovation	.30	.23	.49	yes
Psychological Safety -> Innovative Organisational Climate	.76	.60	.93	yes
Psychological Safety -> Psychological Ownership	.51	.30	.72	yes
Empowering Leadership-> Creative Self-Efficacy	.33	.16	.55	yes
Empowering Leadership -> Emotional Intelligence	.34	.33	.51	yes
Empowering Leadership -> Empowering Job Characteristics	.57	.40	.73	yes

The current researcher assessed the measurement model against the HTMT threshold and from the above it is clear that all constructs achieved discriminant validity. It is therefore concluded that the latent variable measures all seem to measure the construct they are intended to measure.

#### 4.4.1.4 Evaluation of the outer loadings (item loadings)

Lastly, the reliability of the item loadings was evaluated by conducting a PLS bootstrap analysis with a 95% confidence interval. The confidence interval was utilised to establish whether the item loadings were significant or not. Should zero fall within the 95% confidence interval, then the item loadings are regarded as not significant. In turn, if zero does not fall within the 95% confidence interval, then the item loadings are regarded as significant. Alternatively, another method to evaluate the outer loading reliability, is to assess the p-value for the t-test which must be smaller than .05 (i.e. <.05). Thus, a p-value of  $p < .05$  is statistically significant at the 95% confidence interval (Boos, 2003). Table 4.7 provides the statistical information on the outer loadings.

Table 4.7  
Outer Loadings

Constructs	Manifest Variable	Latent Variable	Loading	Confidence Intervals (CI)		Significant from CI	P-Value of T-Test
				2.50%	97.50%		
CS-E1<_Creative Self-Efficacy	CS-E1	Creative Self-Efficacy	.86	.75	.93	yes	.00
CS-E2<_Creative Self-Efficacy	CS-E2	Creative Self-Efficacy	.87	.83	.92	yes	.00
CS-E3<_Creative Self-Efficacy	CS-E3	Creative Self-Efficacy	.79	.56	.92	yes	.00
E11<_Emotional Intelligence	EI1	Emotional Intelligence	-.05	-.28	.16	no	.65
E12<_Emotional Intelligence	EI2	Emotional Intelligence	.81	.71	.88	yes	.00
E13<_Emotional Intelligence	EI3	Emotional Intelligence	.53	.37	.66	yes	.00
E14<_Emotional Intelligence	EI4	Emotional Intelligence	.48	.28	.65	yes	.00
E15(reversed)<_Emotional Intelligence	EI5(reversed)	Emotional Intelligence	.10	-.12	.35	no	.37
E16<_Emotional Intelligence	EI6	Emotional Intelligence	.23	.02	.42	yes	.02
E17<_Emotional Intelligence	EI7	Emotional Intelligence	.28	.04	.47	yes	.01
E18<_Emotional Intelligence	EI8	Emotional Intelligence	.43	.20	.59	yes	.00
E19<_Emotional Intelligence	EI9	Emotional Intelligence	.35	.07	.53	yes	.00
E110<_Emotional Intelligence	EI10	Emotional Intelligence	.46	.25	.61	yes	.00
E111<_Emotional Intelligence	EI11	Emotional Intelligence	.49	.26	.65	yes	.00
E112<_Emotional Intelligence	EI12	Emotional Intelligence	.61	.46	.71	yes	.00
E113<_Emotional Intelligence	EI13	Emotional Intelligence	.36	.13	.56	yes	.00
E114<_Emotional Intelligence	EI14	Emotional Intelligence	.39	.06	.63	yes	.01
E115<_Emotional Intelligence	EI15	Emotional Intelligence	.37	.15	.51	yes	.00
E116<_Emotional Intelligence	EI16	Emotional Intelligence	.61	.45	.73	yes	.00
E117<_Emotional Intelligence	EI17	Emotional Intelligence	.48	.30	.61	yes	.00
E118<_Emotional Intelligence	EI18	Emotional Intelligence	.56	.33	.69	yes	.00
E119<_Emotional Intelligence	EI19	Emotional Intelligence	.41	.14	.61	yes	.00
E120<_Emotional Intelligence	EI20	Emotional Intelligence	.48	.28	.64	yes	.00
E121<_Emotional Intelligence	EI21	Emotional Intelligence	.38	.17	.58	yes	.00
E122<_Emotional Intelligence	EI22	Emotional Intelligence	.50	.31	.64	yes	.00
E123<_Emotional Intelligence	EI23	Emotional Intelligence	.55	.39	.66	yes	.00
E124<_Emotional Intelligence	EI24	Emotional Intelligence	.47	.27	.61	yes	.00
E125<_Emotional Intelligence	EI25	Emotional Intelligence	.68	.50	.78	yes	.00
E126<_Emotional Intelligence	EI26	Emotional Intelligence	.60	.40	.72	yes	.00
E127<_Emotional Intelligence	EI27	Emotional Intelligence	.48	.28	.64	yes	.00

Table 4.7  
Outer Loadings (Continued)

Constructs	Manifest Variable	Latent Variable	Loading	Confidence Intervals (CI)		Significant from CI	P-Value of T-Test
				2.50%	97.50%		
EI28(reversed)<_Emotional Intelligence	EI28(reversed)	Emotional Intelligence	.03	-.16	.21	no	.71
EI29<_Emotional Intelligence	EI29	Emotional Intelligence	.56	.38	.70	yes	.00
EI30<_Emotional Intelligence	EI30	Emotional Intelligence	.43	.20	.62	yes	.00
EI31<_Emotional Intelligence	EI31	Emotional Intelligence	.44	.24	.62	yes	.00
EI32<_Emotional Intelligence	EI32	Emotional Intelligence	.54	.36	.68	yes	.00
EI33(reversed)<_Emotional Intelligence	EI33(reversed)	Emotional Intelligence	-.28	-.48	-.07	yes	.01
EL1<_Empowering Leadership	EL1	Empowering Leadership	.75	.57	.85	yes	.00
EL2<_Empowering Leadership	EL2	Empowering Leadership	.81	.71	.88	yes	.00
EL3<_Empowering Leadership	EL3	Empowering Leadership	.68	.51	.82	yes	.00
EL4<_Empowering Leadership	EL4	Empowering Leadership	.87	.75	.92	yes	.00
EL5<_Empowering Leadership	EL5	Empowering Leadership	.85	.69	.92	yes	.00
IOC Citerion<_Innovative Organisational Climate	IOC Criterion	Innovative Organisational Climate	.89	.82	.93	yes	.00
IOC Stimulant<_Innovative Organisational Climate	IOC Stimulant	Innovative Organisational Climate	.89	.82	.94	yes	.00
PO1<_Psychological Ownership	PO1	Psychological Ownership	.85	.72	.92	yes	.00
PO2<_Psychological Ownership	PO2	Psychological Ownership	.81	.70	.90	yes	.00
PO3<_Psychological Ownership	PO3	Psychological Ownership	.91	.87	.94	yes	.00
PO4<_Psychological Ownership	PO4	Psychological Ownership	.84	.69	.93	Yes	.00
PO5<_Psychological Ownership	PO5	Psychological Ownership	.84	.72	.92	yes	.00
PO6<_Psychological Ownership	PO6	Psychological Ownership	.72	.49	.86	yes	.00
PS1<_Psychological Safety	PS1	Psychological Safety	.33	-.08	.62	no	.06
PS2(reversed)<_Psychological Safety	PS2(reversed)	Psychological Safety	.58	.27	.76	yes	.00
PS3<_Psychological Safety	PS3	Psychological Safety	.29	-.11	.59	no	.09
PS4(reversed)<_Psychological Safety	PS4(reversed)	Psychological Safety	.57	.18	.78	yes	.00
PS5<_Psychological Safety	PS5	Psychological Safety	.62	.26	.79	yes	.00
PS6<_Psychological Safety	PS6	Psychological Safety	.77	.52	.87	yes	.00

Table 4.7  
Outer Loadings (Continued)

Constructs	Manifest Variable	Latent Variable	Loading	Confidence Intervals (CI)		Significant from CI	P-Value of T-Test
				2.50%	97.50%		
Adaptive Service Offering<_FLSI	Adaptive Service Offering	Frontline Service Innovation	.87	.83	.91	yes	.00
Identifying Customer Needs<_FLSI	Identifying Customer Needs	Frontline Service Innovation	.82	.71	.89	yes	.00
Innovation<_FLSI	Innovation	Frontline Service Innovation	.80	.69	.87	yes	.00
General Job Satisfaction<_Empowering Job Characteristics Growth	General Job Satisfaction	Empowering Job Characteristics	.77	.66	.85	yes	.00
Growth Satisfaction<_Empowering Job Characteristics Internal Work	Growth Satisfaction	Empowering Job Characteristics	.88	.81	.93	yes	.00
Motivation<_Empowering Job Characteristics Internal Work	Internal Work Motivation	Empowering Job Characteristics	.83	.75	.88	yes	.00
Motivating Potential<_Empowering Job Characteristics	Motivating Potential	Empowering Job Characteristics	.85	.79	.91	yes	.00

In the current study most of the outer loadings appear to be statistically significant as zero did not fall within the 95% confidence interval and the p-values were smaller than the .05 level of significance.

For three of the *Emotional Intelligence* scale items (EI1, EI5 and EI28) and two of the *Psychological Safety* scale items (PS1 and PS3) zero did not fall within the 95% confidence interval. The p-values of the abovementioned *Emotional Intelligence* scale items and the *Psychological Safety* scale items exceeded the critical p-value of .05 and were therefore statistically not significant. These items were flagged for further evaluation.

#### 4.4.1.5 Goodness-of-fit statistics of the measurement model

The Satorra-Bentler  $\chi^2$  (S-B  $\chi^2$ ) is the measure that is typically used to evaluate overall measurement model fit. It evaluates “the magnitude of discrepancy between the sample and fitted matrices” (Hu & Bentler, 1999, p. 2). Tabachnick and Fidell (2007) consider a S-B  $\chi^2$  value greater than 2.0 acceptable.

Diamantopoulos and Siguaw (2000, p. 85) suggest that the Root Mean Square Error of Approximation (RMSEA) is “one of the most informative fit indices”. It measures the extent of the discrepancy between the observed population covariance matrix and the estimated



population covariance matrix (Hooper, Coughlan, & Mullen, 2008). Hair, Black, Babin, Anderson, and Tatham (2006) recommend the following model fit criteria: RMSEA values <.05 – good fit, between .05 and .08 – reasonable fit, >.08 but <.10 – mediocre fit, >.10 poor fit.

The Goodness of Fit Index (GFI) measures the fit between the hypothetical model and the observed covariance matrix. GFI values closer to 1 and >.90 are indicative of a good fit (Hooper et al., 2008).

The Adjusted Goodness of Fit Index (AGFI) is a correction of the GFI value as the amount of the indicator variables tend to affect it (Tabachnick & Fidell, 2007). AGFI values closer to 1 and >.90 are indicative of a good fit (Hooper et al., 2008).

In assessing the fit of the entire model, the following should be considered: A chi square probability value (p-value) greater than .05 is indicative of good model fit. Thus, a not significant p-value (i.e. not rejecting the null hypothesis) in this instance would demonstrate good model fit.

Table 4.8  
*Goodness-of-Fit Statistics of the Frontline Service Innovation Measurement Model*

Variable	Satorra-Bentler $\chi^2$	P-Value	RMSEA	GFI	AGFI
<b>Combined measurement model consisting of:</b>					
Creative Self-Efficacy					
Emotional Intelligence					
Empowering Leadership					
Psychological Ownership					
Psychological Safety					
<b>Empowering Job Characteristics</b>	639.18	0.00	0.06	0.97	0.97
<b>Frontline Service Innovation</b>	224.11	0.00	0.05	0.97	0.96
<b>Innovative Organisational Climate</b> ( <i>incl. Obstacles subscale</i> )	233.77	0.00	0.07	0.95	0.94
<b>Innovative Organisational Climate</b> ( <i>excl. Obstacles subscale</i> )	110.88	0.01	0.06	0.98	0.97

Upon evaluation of the goodness-of-fit statistics in Table 4.8 the chi square p-values of all of the measurement models seem to be significant. This could be problematic as it indicates lack of satisfactory overall model fit. However, many believe that the chi square p-value is a poor

criterion of overall model fit and as such one should rather consider the other goodness-of-fit statistics. With regard to the remainder of the good fit criteria, most of the model fit indices seem to comply with the critical values for model fit. The RMSEA values suggest that these models should rather be classified under “reasonable fit”. The GFI and AGFI figures of the combined measurement model consisting of *Creative Self-Efficacy*, *Emotional Intelligence*, *Empowering Leadership*, *Psychological Ownership* and *Psychological Safety* fall slightly short of the “good fit” classification. Moreover, it appears that the RMSEA of the *Innovative Organisational Climate* scale improved from 0.06 to 0.07 upon the removal of the *Obstacles subscale*.

#### **4.4.1.6 Conclusions regarding the measurement model**

The following paragraphs serve as a synopsis of the conclusions drawn from the measurement model analyses.

The average inter-item correlation for *Identifying Customers' Needs*, a subscale of *Frontline Service Innovation*, just barely missed Cohen's (1988) inter-item correlation limits. Despite of this, the rest of the evidence that emerged from the measurement model analyses confirmed that this subscale is acceptable, and it was thus retained in the current study.

The *Emotional Intelligence* scale achieved a weak inter-item correlation. This indicates that the items that were utilised to measure *Emotional Intelligence* in the current study, did not consistently measure the same construct. In addition to this the AVE analysis confirmed that more of the variance is explained by measurement error in the items than the variance in the construct. Three items (EI1, EI5 and EI28) were identified as poor items, but the researcher decided to retain these items for the purposes of the current study. The reasons for this being is that the removal of these items will not necessarily improve the reliability statistics of the instrument and will decrease the comparability of the results and influence the construct validity in an unpredictable way.

Although the Cronbach alpha of *General Job Satisfaction*, a subscale of *Empowering Job Characteristics*, seemed marginal the other reliability statistics and the remainder of the measurement model analyses appeared acceptable. The current researcher therefore decided to retain this subscale.

The reliability statistics of the *Obstacles* subscale, a subscale of the *Innovative Organisational Climate* scale, indicated that the subscale achieved poor internal consistency. In addition to

this the goodness of fit statistics in Table 4.8 confirmed that this subscale should be removed from the current study.

Although the *Psychological Safety* scale seems to have poor reliability, the composite reliability (refer to Table 4.4) of this scale seemed acceptable. More of the variance is, however, explained by measurement error in the items of this scale as opposed to the variance in the construct. Further to this, two of the items (PS1 and PS3) of this scale were identified as poor items. Nevertheless, the researcher decided to retain these items for the purposes of the current study.

In conclusion, the measurement model analyses of the remainder of the scales, *Psychological Ownership*, *Creative Self-Efficacy* and *Empowering Leadership*, appeared satisfactory.

#### 4.4.2 Evaluation and Interpretation of the Structural Model

The structural model (Figure 4.1), in the current research study, was scrutinised by evaluating multicollinearity, the R-square values, as well as path coefficients.

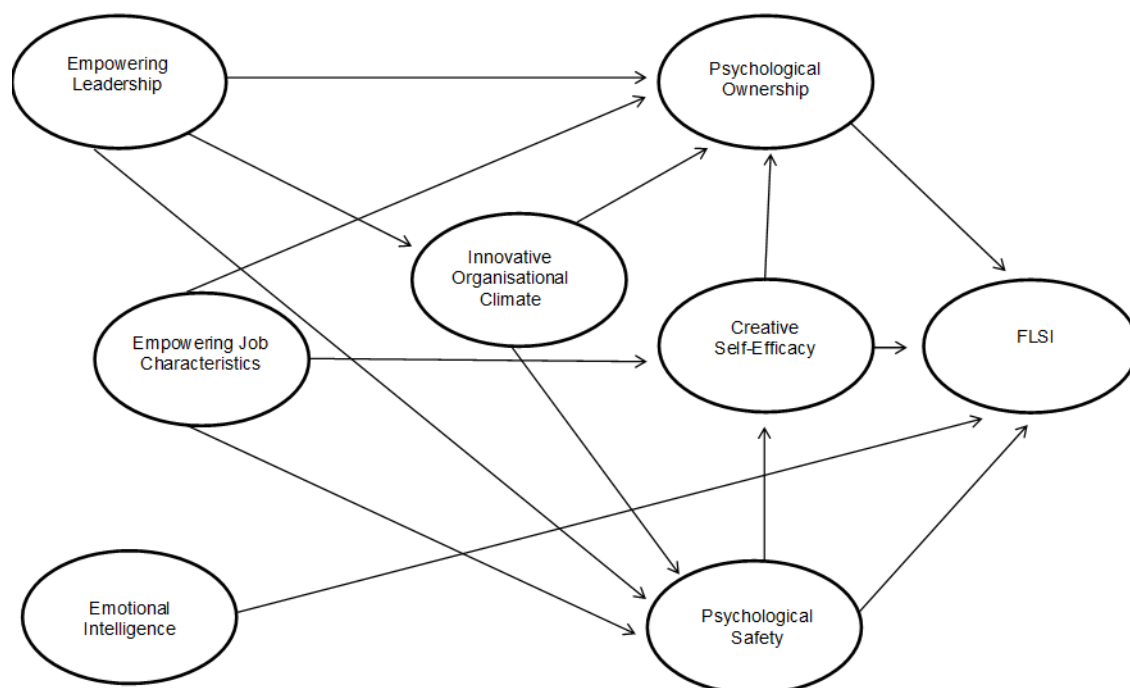


Figure 4.1. Frontline Service Innovation Structural Model.

#### 4.4.2.1 Multicollinearity

Variance Inflation Factor (VIF) coefficients, one method by which multicollinearity is tested, were calculated by the current researcher in Table 4.9. VIF coefficients present the correlation between the exogenous variables in a regression analysis. The general rule of thumb is that VIF's exceeding 5 requires further evaluation, whereas VIF's exceeding 10 are indicative of extreme multicollinearity and may thus require correction (Hair Jr et al., 2017). However, all the VIF coefficients in the current study fell within an acceptable range.

Table 4.9  
*Variance Inflation Factors (VIF)*

Latent Variable	Variance Inflation Factors (VIF)			
	Creative Self-Efficacy	Frontline Service Innovation	Psychological Ownership	Psychological Safety
Creative Self-Efficacy		1.254	1.149	
Emotional Intelligence		1.262		
Empowering Job Characteristics	1.401		1.597	1.575
Empowering Leadership			1.434	1.412
Frontline Service Innovation				
Innovative Organisational Climate			1.507	1.475
Psychological Ownership		1.3		
Psychological Safety	1.401	1.264		

#### 4.4.2.2 Evaluation and interpretation of the R-square value

R-square is amount of variance explained in the endogenous variables by the remaining exogenous variables in the research model (Sekaran, 2001). Hair Jr et al. (2017) consider R-square values of .2 and higher, with specific reference to behavioural studies, as high as it shows predictive accuracy. This may however vary according to the complexity of the model.

The R-square values for this study, displayed in Table 4.10 below, show that 52% ( $R^2$  of .52) of the variance in *Frontline Service Innovation* is explained by the other remaining exogenous variables in the model. This proposes that the overall research model accounts for 52% of the variance observed in *Frontline Service Innovation*.

The rest of the R-squared values indicate that the model accounts for 49% of the variance observed in *Psychological Ownership*, 20% of the variance in *Innovative Organisational*

*Climate*, 45% of the variance in *Psychological Safety* and 9% of the variance in *Creative Self-Efficacy*. These values indicate that there are possibly other variables, that weren't measured in the current study, which may have influenced the endogenous variables in the research model.

Table 4.10  
*R-Square Values for Endogenous Latent Variables*

Endogenous Variables	R-Square
Frontline Service Innovation	.52
Psychological Ownership	.49
Innovative Organisational Climate	.20
Psychological Safety	.45
Creative Self-Efficacy	.09

#### 4.4.2.3 Evaluation and interpretation of the main effects

PLS is intended for prediction as opposed to testing theory (Henseler et al., 2009). In this study the path coefficients were evaluated to determine the strength and statistical significance of the hypothesised relationships.

Bootstrapping makes provision for the estimation of quantities that are related to the sampling distribution. This entails the estimation of the 95% confidence intervals and the p-value to test the null hypothesis (Boos, 2003). The corresponding coefficient would not be deemed statistically significant if zero were to fall within the 95% confidence interval. Conversely, the corresponding coefficient would be deemed statistically significant should zero not fall within the 95% confidence interval

Hair Jr et al. (2017) refer to a bootstrap distribution as a reasonable approximation of an estimated coefficient's distribution in the population. By selecting a 5% level of significance, the p-value must be smaller than .05 for the relationship to be statistically significant at this level (Hair Jr et al., 2017).

Path coefficients were thus evaluated to determine the strength and statistical significance of the hypothesised paths in the structural model. The strength of the path coefficients was assessed against Suhr's (n.d.) criteria. Path coefficients with a value  $< .1$  = small effect, values

around .3 = medium effect, and >.5 = large effect. Table 4.11 confirms the statistical significance of the path coefficients in the current study. The researcher firstly determined whether zero falls within the 95% confidence interval and secondly whether  $p < .05$  as to confirm the statistical significance of the relationship.

Table 4.11  
*Path Coefficients*

Constructs	From	To	Original Sample	Confidence Intervals (CI)		Significant from CI	P-Value of T-Test
				2.50%	97.50%		
Psychological Ownership -> Frontline Service Innovation	Psychological Ownership	Frontline Service Innovation	.13	-.01	.27	no	.06
Psychological Safety -> Frontline Service Innovation	Psychological Safety	Frontline Service Innovation	0	-.13	.12	no	.97
Psychological Safety -> Creative Self-Efficacy	Psychological Safety	Creative Self-Efficacy	.07	-.13	.31	no	.55
Creative Self-Efficacy -> Psychological Ownership	Creative Self-Efficacy	Psychological Ownership	.06	-.13	.26	no	.55
Empowering Leadership -> Innovative Organisational Climate	Empowering Leadership	Innovative Organisational Climate	.44	.30	.59	yes	.00
Innovative Organisational Climate -> Psychological Safety	Innovative Organisational Climate	Psychological Safety	.42	.18	.63	yes	.00
Empowering Leadership -> Psychological Safety	Empowering Leadership	Psychological Safety	.13	-.09	.35	no	.24
Empowering Leadership -> Psychological Ownership	Empowering Leadership	Psychological Ownership	-.01	-.22	.27	no	.96
Innovative Organisational Climate -> Psychological Ownership	Innovative Organisational Climate	Psychological Ownership	-.11	-.28	.06	no	.21
Emotional Intelligence -> Frontline Service Innovation	Emotional Intelligence	Frontline Service Innovation	.54	.44	.69	yes	.00
Empowering Job Characteristics -> Creative Self-Efficacy	Empowering Job Characteristics	Creative Self-Efficacy	.26	.02	.45	yes	.02
Creative Self-Efficacy -> Frontline Service Innovation	Creative Self-Efficacy	Frontline Service Innovation	.23	.07	.36	yes	.00
Empowering Job Characteristics -> Psychological Ownership	Empowering Job Characteristics	Psychological Ownership	.74	.55	.90	yes	.00
Empowering Job Characteristics -> Psychological Safety	Empowering Job Characteristics	Psychological Safety	.25	.00	.48	yes	.05

Figure 4.2 is a depiction of the structural model that emerged from the statistical analyses that were conducted. The values within the circles of the latent variables resemble the R-square which is also presented in Table 4.11. The values on the connecting lines of the latent variables are the path coefficient value. The main effect hypotheses, which were statistically

significant, as well as the strength or magnitude of the path coefficients will be subsequently referred to.

The hypothesised relationships between *Empowering Leadership* and *Innovative Organisational Climate*, *Emotional Intelligence* and *Frontline Service Innovation*, *Empowering Job Characteristics* and *Creative Self-Efficacy*, *Creative Self-Efficacy* and *Frontline Service Innovation*, *Empowering Job Characteristics* and *Psychological Ownership*, and *Empowering Job Characteristics* and *Psychological Safety* were established as being significant.

Further to this the following mediation hypotheses were established as being significant: *Innovative Organisational Climate* mediates the relationship between *Empowering Leadership* and *Psychological Safety*; and *Creative Self-Efficacy* mediates the relationship between *Empowering Job Characteristics* and *Frontline Service Innovation*.

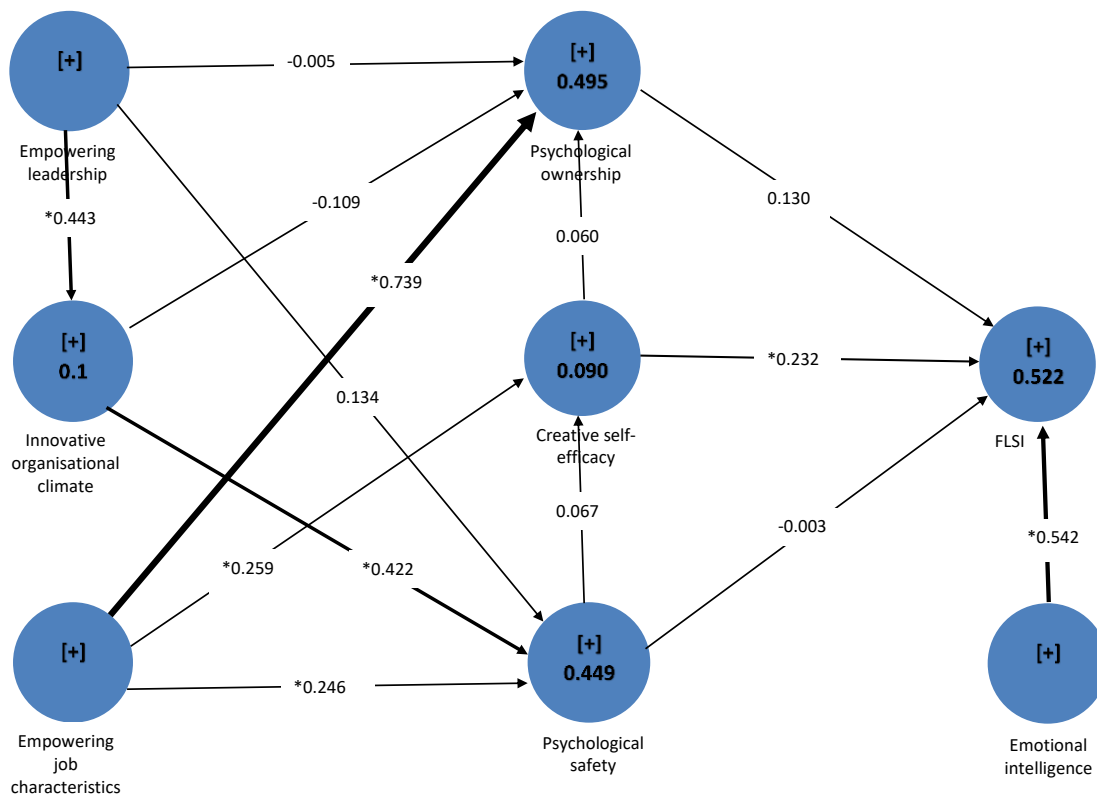


Figure 4.2: Structural Model (with Path Coefficients)

Note. An asterisk (\*) is indicative of a significant path coefficient.

The magnitude of the path coefficients between the latent variables were evaluated against Suhr's (n.d.) criteria. The path coefficients between *Emotional Intelligence* and *Frontline Service Innovation*, and *Empowering Job Characteristics* on *Psychological Ownership* were considered rather "large" whereas the path coefficients between *Empowering Leadership* and

*Innovative Organisational Climate*, and *Innovative Organisational Climate* and *Psychological Safety* seem to be of “medium” size. The path coefficients between *Empowering Job Characteristics* and *Creative Self-efficacy*, and *Creative Self-efficacy* and *Frontline Service Innovation*, and *Empowering Job Characteristics* and *Psychological Safety* were also of moderate strength. The rest of the path coefficients were not significant.

#### 4.4.2.4 Evaluation of proposed hypotheses

The statistical significance of all the path coefficients is discussed in the following paragraphs.

***Hypothesis 1: In the proposed Frontline Service Innovation structural model it is hypothesised that Psychological Ownership positively influences Frontline Service Innovation.***

The hypothesised relationship between *Psychological Ownership* and *Frontline Service Innovation* was established as being marginally *not significant*. The PLS path coefficient was equal to .13, with zero falling within the 95% confidence interval.

The hypothesis that *Psychological Ownership* has a positive impact on *Frontline Service Innovation* was therefore not supported. Further research regarding this relationship is recommended.

***Hypothesis 2: In the proposed Frontline Service Innovation structural model it is hypothesised that Psychological Safety positively influences Frontline Service Innovation.***

The hypothesised relationship between *Psychological Safety* and *Frontline Service Innovation* was established as being *not significant*. The PLS path coefficient was equal to -.003, with zero falling within the 95% confidence interval.

Although extant research indicated that there is indeed a link between *Psychological Safety* and risk taking, experimentation, exploratory learning and creativity (Mavrokordatos, 2015; Edmondson & Lei, 2014) no empirical evidence for this specific correlation could be found. The finding is also contradictory to the current researcher's expectations.

***Hypothesis 3: In the proposed Frontline Service Innovation structural model it is hypothesised that Psychological Safety positively influences Creative Self-Efficacy.***



The hypothesised relationship between *Psychological Safety* and *Creative Self-Efficacy* was established as being *not significant*. The PLS path coefficient was equal to .07 with zero falling within the 95% confidence interval.

Apart from Abror et al.'s (2016) research that explored the relation between *Psychological Safety* and *Self-Efficacy*, there is no other research that supports this hypothesis. Further research on this hypothesis is thus recommended.

***Hypothesis 4: In the proposed Frontline Service Innovation structural model it is hypothesised that Creative Self-Efficacy positively influences psychological ownership.***

The hypothesised relationship between *Creative Self-Efficacy* and *Psychological Ownership* was established as being *not significant*. The PLS path coefficient was equal to .06 with zero falling within the 95% confidence interval.

A review of the literature did not bear scientific evidence in support of a positive correlation between *Creative Self-Efficacy* and *Psychological Ownership*. The statistical finding is contradictory to the current researcher's anticipated outcome. As extant research on this correlation is limited, further research is suggested.

***Hypothesis 5: In the proposed Frontline Service Innovation structural model it is hypothesised that the relationship between Psychological Safety and Psychological Ownership is mediated by Creative Self-Efficacy.***

The hypothesised relationship between *Psychological Safety* and *Creative Self-Efficacy* was found to be *not significant*. The PLS path coefficient was equal to .07 with zero falling within the 95% confidence interval. Additionally, the hypothesised relationship between *Creative Self-Efficacy* and *Psychological Ownership* was established as being *not significant*. The PLS path coefficient was equal to .06 with zero falling within the 95% confidence interval.

The results do not seem to support the mediation hypothesis as it appears that *Psychological Safety* did not have a positive impact on *Creative Self-Efficacy* and in turn *Creative Self-Efficacy* did not have a positive impact on *Psychological Ownership*. It is therefore concluded that no mediation occurred.

Although there is no extant research that supports these hypothesised correlations the current researcher believes there could be value in conducting future research on these relationships.

***Hypothesis 6: In the proposed Frontline Service Innovation structural model it is hypothesised that Empowering Leadership positively influences Innovative Organisational Climate.***

The hypothesised relationship between *Empowering Leadership* and *Innovative Organisational Climate* was established as being *significant*. The PLS path coefficient was .44 with zero not falling within the 95% confidence interval.

The researcher did not find any corroborating evidence for this hypothesised relationship in the existing literature, but the current finding suggests that a leader who are perceived as empowering by his or her subordinates will promote an *Innovative Organisational Climate* within the organisation.

***Hypothesis 7: In the proposed Frontline Service Innovation structural model it is hypothesised that Empowering Leadership positively influences Psychological Safety.***

The hypothesised relationship between *Empowering Leadership* and *Psychological Safety* was established as being *not significant*. The PLS path coefficient was equal to .13 with zero falling within the 95% confidence interval.

Apart from Mavrokordatos' (2015) study there is limited empirical evidence of a positive correlation specifically between *Empowering Leadership* and *Psychological Safety*. However, these findings are contradictory to the current researcher's expectations and further research on the relation between these two variables is proposed.

***Hypothesis 8: In the proposed Frontline Service Innovation structural model it is hypothesised that the relationship between Empowering Leadership and Psychological Safety is mediated by Innovative Organisational Climate.***

The hypothesised relationship between *Empowering Leadership* and *Innovative Organisational Climate* was established as being *significant*. The PLS path coefficient was .44 with zero not falling within the 95% confidence interval. The hypothesised relationship between *Innovative Organisational Climate* and *Psychological Safety* was also established as being

*significant*. The PLS path coefficient was equal to .42 with zero not falling within the 95% confidence interval.

It appears that *Empowering Leadership* does have a positive influence on *Innovative Organisational Climate* as do *Innovative Organisational Climate* have on *Psychological Safety*. The mediation hypothesis is therefore supported by the results. The path coefficient between *Empowering Leadership* and *Psychological Safety* was, however, insignificant, which means that it is a case of full mediation.

Despite the lack of sufficient extant research on this mediating relationship, the statistically significant results satisfy the current researcher's expectations. These findings suggest that perceptions of empowerment by the leader will cultivate an *Innovative Organisational Climate*, which in turn will cultivate a perception of interpersonal safety amongst the FLE's.

***Hypothesis 9: In the proposed Frontline Service Innovation structural model it is hypothesised that Empowering Leadership positively influences Psychological Ownership.***

The hypothesised relationship between *Empowering Leadership* and *Psychological Ownership* was established as being *not significant*. The PLS path coefficient was equal to -.03 with zero falling within the 95% confidence interval.

Even though there are past studies that support the positive relationship between various leaderships styles and *Psychological Ownership* none of these specifically include the construct of *Empowering Leadership*. The current researcher however believes that this hypothesis should be subjected to further research.

***Hypothesis 10: In the proposed Frontline Service Innovation structural model it is hypothesised that Innovative Organisational Climate positively influences Psychological Ownership.***

The hypothesised relationship between *Innovative Organisational Climate* and *Psychological Ownership* was established as being *not significant*. The PLS path coefficient was equal to -.11 with zero falling within the 95% confidence interval.

Albeit that the literature review did not yield any evidence of past research studies on the positive relation between *Innovative Organisational Climate* and *Psychological Ownership*, further research on this correlation is recommended.

***Hypothesis 11: In the proposed Frontline Service Innovation structural model it is hypothesised that the relationship between Empowering Leadership and Psychological Ownership is mediated by Innovative Organisational Climate.***

The hypothesised relationship between *Empowering Leadership* and *Innovative Organisational Climate* was established as being *significant*. The PLS path coefficient was .44 with zero not falling within the 95% confidence interval. On the contrary it was found that the hypothesised relationship between *Innovative Organisational Climate* and *Psychological Ownership* was established as being *not significant*. The PLS path coefficient was equal to -.11 with zero falling within the 95% confidence interval.

The results confirm that *Empowering Leadership* impacts on *Innovative Organisational Climate*, but *Innovative Organisational Climate* does not impact *Psychological Ownership*. Accordingly, it is evident that the results do not correspond with the hypothesised mediating effect.

The literature failed to provide any empirical evidence of the mediating effect of *Innovative Organisational Climate* on the relationship between *Empowering Leadership* and *Psychological Ownership*. Despite this, the relationship between *Empowering Leadership* and *Innovative Organisational Climate* were found to be statistically significant. However, due to the relationship between *Innovative Organisational Climate* and *Psychological Ownership* being not significant the overall mediating effect will need to be scientifically reviewed in the future.

***Hypothesis 12: In the proposed Frontline Service Innovation structural model it is hypothesised that Emotional Intelligence positively influences Frontline Service Innovation.***

The hypothesised relationship between *Emotional Intelligence* and *Frontline Service Innovation* was established as being *significant*. The PLS path coefficient was .54 with zero not falling within the 95% confidence interval.

The results in the current study are empirically supported by previous research (Boxer & Rekettye, 2011). This specific relationship is thus corroborated by extant research and the outcome suggests that FLE's with high *Emotional Intelligence* is likely to display *Frontline Service Innovation*.

***Hypothesis 13: In the proposed Frontline Service Innovation structural model it is hypothesised that Empowering Job Characteristics positively influence Creative Self-Efficacy.***

The hypothesised relationship between *Empowering Job Characteristics* and *Creative Self-Efficacy* was established as being *significant*. The PLS path coefficient was .26 with zero not falling within the 95% confidence interval.

Despite the lack of extant research on the hypothesised relationship between *Empowering Job Characteristics* and *Creative Self-Efficacy*, the results of the current study nevertheless proved statistically significant. These findings suggest that an *Empowering Job Characteristics*, as perceived by the incumbent, has a positive effect on the individual's belief in his or her creative abilities.

***Hypothesis 14: In the proposed Frontline Service Innovation structural model it is hypothesised that Creative Self-Efficacy positively influences Frontline Service Innovation.***

The hypothesised relationship between *Creative Self-Efficacy* and *Frontline Service Innovation* was established as being *significant*. The PLS path coefficient was .23 with zero not falling within the 95% confidence interval.

This statistically significant relationship in the present study corroborated previous research findings (Tierney & Farmer, 2002; Hsu et al., 2011). The results of the study imply that incumbents with a high self-belief in their creative abilities will display innovative behaviour within the frontline service context. Thus, these findings suggest that overall, *Creative Self-Efficacy* will have a positive effect on *Frontline Service Innovation*.

***Hypothesis 15: In the proposed Frontline Service Innovation structural model it is hypothesised that the relationship between Empowering Job Characteristics and Frontline Service Innovation is mediated by Creative Self-Efficacy.***

The hypothesised relationship between *Empowering Job Characteristics* and *Creative Self-Efficacy* was established as being *significant*. The PLS path coefficient was .26 with zero not falling within the 95% confidence interval. Moreover, the hypothesised relationship between *Creative Self-Efficacy* and *Frontline Service Innovation* was established as being *significant*. The PLS path coefficient was .23 with zero not falling within the 95% confidence interval.

It appears that *Empowering Job Characteristics* does have a positive influence on *Creative Self-Efficacy*. Likewise, *Creative Self-Efficacy* seemed to have a positive impact on *Frontline Service Innovation*. The mediation hypothesis is therefore supported by the results. The path between *Empowering Leadership* and *Psychological Ownership* was inadvertently not specified in the model, hence the inference about full versus partial mediation could not be made.

The significant statistical findings on the mediating effect of *Creative Self-Efficacy* on the relationship between *Empowering Job Characteristics* and *Frontline Service Innovation* in the current study satisfies the researcher's expectations. Due to the lack of extant research on the interacting effects between these variables, this finding could potentially provide support for future research studies.

***Hypothesis 16: In the proposed Frontline Service Innovation structural model it is hypothesised that Empowering Job Characteristics positively influence Psychological Ownership.***

The hypothesised relationship between *Empowering Job Characteristics* and *Psychological Ownership* was established as being *significant*. The PLS path coefficient was .74 with zero not falling within the 95% confidence interval.

These results are consistent with the research findings of Lee and Song (2014). This finding suggests that *Empowering Job Characteristics* will impact positively on an individual's *Psychological Ownership*.

***Hypothesis 17: In the proposed Frontline Service Innovation structural model it is hypothesised that Empowering Job Characteristics positively influence Psychological Safety.***

The hypothesised relationship between *Empowering Job Characteristics* and *Psychological Safety* was established as being *significant*. The PLS path coefficient was .25 with zero not falling within the 95% confidence interval.

Although a review of the literature failed to yield extant research on the relation between *Empowering Job Characteristics* and *Psychological Safety*, the findings in the current study proved statistically significant.

#### 4.5 CHAPTER SUMMARY

The statistical results were presented and discussed in this chapter. Validation of the measurement model entailed reliability (item) analysis that was conducted to determine the internal consistency of the measuring instruments' items. Thereafter, PLS-SEM was performed to assess both the measurement and the structural models, but LISREL was utilised on for the evaluation of the measurement model where necessary. The application of PLS enabled the researcher to evaluate the reliability of the latent variables and subsequently interpret the structural model's path coefficients.

The statistical analyses that were performed on the measurement model indicated that for the constructs of *Emotional Intelligence* and *Psychological Safety*, more of the variance remains in the error or unexplained variance than the variance explained by the construct itself. Moreover, the outer loadings of three of the *Emotional Intelligence* scale's items and two of the *Psychological Safety* scale's items seem to be statistically not significant and are considered as limitations to the current study.

Although some of the formulated hypotheses were not found to be significant, the path coefficients and structural model still provided valuable results pertaining to the nomological network of variables and the connections between these variables. In Chapter 5 the results will be discussed in more depth.

## CHAPTER 5

### DISCUSSION OF RESULTS, IMPLICATIONS, LIMITATIONS AND RECOMMENDATIONS

#### 5.1 INTRODUCTION

Chapter 4 highlighted those variables that explain variance in *Frontline Service Innovation* among frontline employees in an agricultural retail, trade and services organisation within the Western Cape. This chapter will elaborate on the research findings of Chapter 4 and the implications for the management of frontline employees will be discussed. Chapter 5 will conclude with the limitations of the study and recommendations for future research.

The purpose of the research study was to answer the research initiating question of what are the antecedents of *Frontline Service Innovation* among frontline employees employed by an agricultural retail, trade and services organisation within the Western Cape? The objective was thus to develop and empirically test a theoretical model that explains the antecedents of variance in *Frontline Service Innovation* among frontline employees employed by an agricultural retail, trade and services organisation operating within the Western Cape.

This research study aimed to:

- Identify the most salient antecedents of *Frontline Service Innovation* among frontline employees employed by an agricultural retail, trade and services organisation operating in the Western Cape;
- Propose and test an exploratory *Frontline Service Innovation* structural model; and
- Confirm the managerial implications of the research findings and recommend practical interventions to increase *Frontline Service Innovation* among frontline employees employed by an agricultural retail, trade and services organisation operating in the Western Cape.

In total the current study consisted of seventeen hypotheses whereof thirteen were direct effect hypotheses (hypotheses 1, 2, 3, 4, 6, 7, 9, 10, 12, 13, 14, 16 and 17) and four were mediation hypotheses (hypotheses 5, 8, 11 and 15) from which two direct sub-hypotheses for each mediation hypothesis can be derived.

The hypothesised relationships in six of the direct effect hypotheses (hypotheses 6, 12, 13, 14, 16 and 17) and two of the mediation hypotheses (hypotheses 8 and 15) were found to be significant.



## 5.2 METHODOLOGICAL CHALLENGES

The current study did present several challenges, which were of a rather methodological nature. These included the sample size and representation, the data gathering procedure and the language ability of the participants.

The data was gathered from a single organisation, which primarily trades with farming communities within the Western Cape. Although the sample is not representative of the Economically Active Population, or possibly even the general frontline employee population within the Western Cape, the purposive sampling method may have made provision for a more accurate depiction of the population of frontline employees within agricultural retail, trade and services organisations in the Western Cape. Generally, the coloured group is larger within the Western Cape farming communities as opposed to the African population and the employment rate for males is traditionally higher within the agricultural sector. Even though the sample representation and the size could be described as satisfactory, a larger sample and more participating organisations may have yielded more generalisable findings. The current researcher did approach the three leading agricultural organisations within the Western Cape, but unfortunately only one was willing to participate at that point in time. Fortunately, she managed to access the desired number of participants, who adhere to the inclusion criteria, in this single organisation within an approximate radius of 200-kilometres from her residence. She paid a second visit to some of the retail stores to include those participants who were on leave during the first visit to enhance the sample size.

The data gathering procedure was rather timeous and labour intensive, as the researcher physically attended and facilitated the sessions at the various retail stores within the Western Cape. Further to this, the operational requirements of each store had to take preference. Consequently, some of the stores, especially the smaller ones, could only release one to three participants at a time and the researcher often had to wait around during the busy lunch hour rush, from 12:00 to 14:00, before she could resume the sessions. To complicate matters further, some of the stores did not have a facility where the participants could be seated whilst completing the survey and at times management had to avail their offices for such purposes.

Ninety-six percent of the sample indicated that their home language is Afrikaans and 79% utilised the Afrikaans version of the questionnaire to complete the survey. The Afrikaans version was translated from the English questionnaires and subsequently back-translated to English (see Appendix B) so as to ensure construct validity. The questionnaire was presented

in a combined bilingual format, English and Afrikaans (see Appendix A), in order to enable participants to check their understanding of each item. The current researcher is cognisant of the fact that the varying language abilities of the participants could have led to random responding, but this is, however, not seen as a serious threat as the psychometric properties of the various instruments were found to be satisfactory.

### 5.3 DISCUSSION ON MEASUREMENT INSTRUMENTS UTILISED

The measurement model presented several constraining factors and as such the measures that operationalised *Innovative Organisational Climate*, *Emotional Intelligence*, *Psychological Safety*, *Frontline Service Innovation* and *Empowering Job Characteristics* raised some concern regarding their utility within the specific context of the current research study. In the following paragraphs the specificities of these challenges are discussed.

The *Obstacles* scale, a subscale of the *Innovative Organisational Climate* scale, was flagged as problematic due to its overall poor reliability statistics (see Table 4.3). Upon further evaluation the researcher decided to remove this subscale, which led to a slight improvement in the goodness-of-fit statistics of the *Innovative Organisational Climate* scale (see Table 4.8).

The scales that measured *Emotional Intelligence* and *Psychological Safety* achieved poor reliability statistics. Albeit that the *Emotional Intelligence* scale obtained good internal consistency, the average inter-item correlations indicated that the items did not consistently measure the same construct. Upon the evaluation of the outer loadings, items EI1, EI5, EI 28, and PS1 and PS3 of the respective measures were flagged as problematic. Further to this, both these scales obtained low Average Variance Extracted scores. Thus, these measures did not explain enough of the variance in the respective latent variable in the current study, and as such, they may not effectively operationalise the relevant construct within the given context. Despite this, both these measures obtained acceptable composite reliabilities and outer loadings and were thus retained in the current study.

Although *Identifying Customers' Needs*, a subscale of *Frontline Service Innovation*, achieved a weak average inter-item correlation and *General Job Satisfaction*, a subscale of *Empowering Job Characteristics*, achieved a marginal Cronbach alpha, the other reliability statistics for these two subscales were acceptable. Despite these slight non-conformances, both these subscales were retained in the current study.

Apart from the scales discussed above, the measurement model analyses of *Psychological Ownership*, *Creative Self-Efficacy* and *Empowering Leadership*, were satisfactory.

#### 5.4 DISCUSSION ON RESEARCH FINDINGS

Upon evaluation of the hypotheses and the path coefficients within the *Frontline Service Innovation* structural model, *Emotional Intelligence*, *Empowering Job Characteristics*, *Creative Self-Efficacy* emerged as the strongest predictors of *Frontline Service Innovation* within an agricultural retail, trade and services organisation within the Western Cape. It would probably be safe to assume that the results are generalisable to the other agricultural retail, trade and services organisations within the Western Cape.

All the hypothesised relationships, whether direct or indirect, that derived from *Empowering Job Characteristics*, were found to be significant in the current study. These include the direct relationship between *Empowering Job Characteristics* and the following respective latent variables: *Psychological Ownership* (hypothesis 16); *Psychological Safety* (hypothesis 17); *Creative Self-Efficacy* (hypothesis 13); and the indirect relationship between *Empowering Job Characteristics* and *Frontline Service Innovation* that is mediated by *Creative Self-Efficacy* (hypothesis 15). *Empowering Job Characteristics* thus seems to have an overall positive effect in the proposed *Frontline Service Innovation* structural model. Some of these research findings are corroborated by previous studies. Lee and Song's (2014) research on the effect (direct and indirect) between job characteristics and service quality yielded a positive relationship between Job Characteristics and Psychological Ownership. Moreover, the findings of the current study are further supported by Judeh's (2012) research on the effect of job characteristics on self-efficacy and job performance. As with this study, Judeh found a positive relationship between job characteristics and self-efficacy but failed to find support for the link between self-efficacy and job performance. What distinguishes the current study from the former is that this is the first known study to research the linkage of this specific construct combination within the innovation research space and to provide empirical evidence for these hypothesised relationships – i.e. a positive direct linkage between *Empowering Job Characteristics* (by means of the Simple Additive Index method) and *Creative Self-Efficacy*; and the mediating effect of *Creative Self-Efficacy* on the relationship between *Empowering Job Characteristics* and *Frontline Service Innovation*.

*Emotional Intelligence* and *Creative Self-Efficacy* are the only latent variables that resulted in direct positive linkages with *Frontline Service Innovation* within the proposed structural model (hypotheses 12 and 14). Former research on *Emotional Intelligence* of frontline employees is

widely attainable, but to the researcher's knowledge, there is only a single study, conducted by Boxer and Rekettye (2011), that has confirmed the positive linkage between *Emotional Intelligence* and innovative behaviour within the frontline context. In addition, the support for the hypothesised relationship between *Creative Self-Efficacy* and *Frontline Service Innovation* (hypothesis 14), provided by the current study, are also regarded a valuable contribution to Farmer and Tierney's (2017), the pioneers of *Creative Self-Efficacy*, collection of research on this construct. Although the linkage between *Creative Self-Efficacy* and creative performance has been researched before, the literature on *Creative Self-Efficacy* within the customer service milieu is rather limited. The only other known study within this specific context, was that of Hsu et al.'s (2011). They investigated the relationship between creative self-efficacy and innovative work behaviour of employees within a service setting and their results corresponded with that of the current study. As such these two direct correlations are considered the most valuable contributions that this study yielded towards establishing the predictors of *Frontline Service Innovation* on an individual, organisational level.

In the current study *Empowering Leadership* surprisingly did not have a direct positive relationship with either *Psychological Ownership* (hypothesis 9) or *Psychological Safety* (hypothesis 7). Even though both these relationships were not widely supported by extant research, there was still a reasonable expectation that the findings would yield positive correlations between these respective constructs. While the relationship between *Psychological Ownership* and *Psychological Safety* and other forms of leadership – i.e. authentic leadership (Alok, 2014), spiritual leadership (Arshad & Abbasi, 2014) and inclusive leadership (Mavrokordatos, 2015) – have been researched, the current study is the first to explore the relationships between *Empowering Leadership* and *Psychological Ownership* and *Psychological Safety* respectively.

Despite the disappointment about the lack of confirmation of the researcher's expectations, the results confirmed the anticipated direct relationship between *Empowering Leadership* and *Innovative Organisational Climate* (hypothesis 6), as well as the indirect relationship between *Empowering Leadership* and *Psychological Safety* (hypothesis 8). Regardless of the absence of extant research in support of these hypotheses, the current findings satisfy the expectation that *Empowering Leadership* plays an important role in establishing an organisational environment wherein frontline employees feel safe to take risks. However, the lack of evidence, provided by the current research, for the direct relationships between *Empowering Leadership* and *Psychological Safety* (hypothesis 7) raised the question of the relevance of the items of this specific *Psychological Safety* scale, within the context of the current study. This notion will be discussed further under section 5.6 of the current chapter.

Surprisingly, the direct relationships between *Psychological Ownership* (hypothesis 1) and *Psychological Safety* (hypothesis 2) with *Frontline Service Innovation* respectively, did not support the researcher's expectations. Although the extant research on these respective relationships, specifically within the frontline context and individual level is limited, some authors alluded to the possibility of a positive linkage between the said constructs. Van Dyne and Pierce (2004) are convinced that service employees, who have direct customer contact, should harbour a sense of *Psychological Ownership*. However, a noteworthy finding of the current study is that the relationship between *Psychological Ownership* and *Frontline Service Innovation* is marginally non-significant ( $p = .06$ , see Table 4.11) which may prompt future research in this respect. In terms of *Psychological Safety*, Zhang Pengcheng found that this construct had a positive influence on creativity (Chen et al., 2015). Moreover, the literature on the connection between *Psychological Safety* and innovation within a team context is plentiful (e.g. Lee, Swink, & Pandejpong, 2011; Thompson & Choi, 2006), but not so much on individual level. According to Chen et al., the individual studies in this regard are more focussed on the individual state characteristics. This possibly suggests that the construct of *Psychological Safety* may not have been conceptualised correctly within the context of the current *Frontline Service Innovation* structural model and will be elaborated upon in section 5.6 of this chapter.

The path coefficients (Figure 4.2) provide further insight into the strength of the statistically significant relationships, or so-called paths, between the latent variables in the structural model of the current study. The findings indicate that the path coefficients between the following latent variables have a large effect size: *Empowering Job Characteristics* and *Psychological Ownership*, and *Emotional Intelligence* and *Frontline Service Innovation*. The path coefficients between the following latent variables have a medium effect size: *Empowering Leadership* and *Innovative Organisational Climate*, and *Innovative Organisational Climate* and *Psychological Safety*. The path coefficients between *Empowering Job Characteristics* and *Creative Self-efficacy*, and *Creative Self-efficacy* and *Frontline Service Innovation*, and *Empowering Job Characteristics* and *Psychological Safety* were also of moderate strength.

The evidence above emphasises the effect of *Emotional Intelligence* on *Frontline Service Innovation* within the agricultural retail, trade and services sphere within the Western Cape. However, due to the unavailability of modification indices within the statistical approach utilised, potentially significant relationships that have not been specified between the latent variables of the current structural model are unknown.

The R-square values for this study, displayed in Table 4.10, show that 52% ( $R^2$  of .52) of the variance in *Frontline Service Innovation* is explained by the other remaining exogenous variables in the model. This proposes that the overall research model accounts for 52% of the variance observed in *Frontline Service Innovation*. The amount of variance explained is fairly high for social science research, although one should keep in mind that 48% of the variance in the model is left unexplained.

*Frontline Service Innovation* seems to be a relatively new concept and as such the empirical evidence in general is rather limited. The results thus partially correspond with former research studies. The findings suggest that by developing and enhancing the *Emotional Intelligence* and *Creative Self-Efficacy* of frontline employees, and by empowering the frontline employees through the characteristics of the job (i.e. *Empowering Job Characteristics*) Western Cape based agricultural, retail and services organisations may promote service innovation on individual frontline level.

## 5.5 ORGANISATIONAL IMPLICATIONS

Before organisations can consider organisational development and change interventions within the customer services milieu, they should first ensure that they lay a strong customer services foundation. That is, the basic principles (e.g. telephone and general etiquette) of customer services should be in place. If the customer's first encounter or the so-called moment of truth with the frontline employee is an unpleasant experience, then the employees might not even get the opportunity to generate and present creative solutions.

The results of the current study may present a myriad of organisational implications, provided that the foundation of basic customer services has been laid and is maintained. Overall, the researcher proposes the promotion of optimal leadership behaviours, appropriate selection techniques, the presentation of developmental interventions, and conducive organisational practices.

### 5.5.1 Leadership

Although the results of the current study did not support the complete path leading from *Empowering Leadership* all the way through to *Frontline Service Innovation*, the frontline supervisors as well as management in general and their support for *Frontline Service Innovation* is still considered an essential component wherefrom the other change and development practices should flow. Management, at all levels, is primarily responsible for laying and maintaining the strong customer services foundation. They should thus consistently



and visibly demonstrate *Frontline Service Innovation* in order to promote an instil an innovative customer services culture within the relevant organisation. One cannot expect the frontline employees to place a premium on innovation within the customer services realm if their managers are not leading by example.

Excellence in customer services should thus firstly form an integral part of the mission statement of agricultural retail, trade and services organisations and thereafter a strategy with a specific focus on *Frontline Service Innovation* should follow suit. Accordingly, leadership development initiatives should focus on the leaders' rollout plans, taking into consideration the results of the current study, as to how each will activate and enhance *Frontline Service Innovation* within their specific department or division.

### **5.5.2 Selection**

Due to the high cost of selection practices, many South African organisations only assess for job suitability at management level. Consequently, frontline employees, who is the 'face' of the organisation and often the first point of contact, are appointed rather casually. The current researcher proposes the implementation of a more stringent selection process in this regard.

Firstly, agricultural retail, trade and services organisations should develop a unique competency framework for frontline employees. This competency model is to include valuable constructs, as per the evidence of the current research study, such as *Emotional Intelligence*, *Creative Self-Efficacy* and *Frontline Service Innovation*. Accordingly, assessment tools, that measure these competencies, should be included in the selection battery.

The current research study contributed immensely towards the conceptualisation of the construct of *Frontline Service Innovation* and to the researcher's knowledge, an instrument that measures this construct did not exist prior to the study. Accordingly, the researcher proposes the inclusion of the current *Frontline Service Innovation* measure together with Tierney and Farmer's *Creative Self-Efficacy* measure in the frontline selection battery. Alternative assessment tools to measure *Emotional Intelligence* in this context could be considered and ideally, as per the two aforementioned measures, translated to Afrikaans in order to cater for the language preferences of the majority of the frontline employees within agricultural, retail and trade organisations within the Western Cape.

### 5.5.3 Training and Development

The most useful feature of *Emotional Intelligence*, *Creative Self-Efficacy* and *Frontline Service Innovation* is that these are all malleable constructs and as such may be susceptible to change interventions. The researcher proposes that the more well-known interventions such as formal training (i.e. classroom based or e-learning) should be supplemented by informal development practices such as coaching to develop these constructs in the frontline space.

Emotional intelligence training within a frontline service context (banks and hospitals), have been shown to be effective in the improvement of service quality and customer or patient feedback (Beigi & Shirmohammadi, 2011; Bamberger, Genizi, Kerem, Reuven-Lalung, Dolev, Srugo, & Rofe, 2017). Exposure and creating awareness about the construct, by means of training, may promote awareness and potentially enhance the utility of *Emotional Intelligence* in the workplace. Training participants often evaluate their own *Emotional Intelligence* during training and through introspection may become aware of their own developmental areas in this respect.

As with emotional intelligence, the literature supports the positive relationship between training and the development of creative self-efficacy (Mathisen & Bronnick, 2009; Robbins & Kegley, 2010). The first study was conducted in a classroom-based setup whereas the other study was a computer-based self-study. The implication arising from both these studies is that organisations are able to enhance employees' beliefs in their own creative productivity by teaching creativity. Agricultural retail, trade and services organisations could therefore offer similar creativity training to their frontline staff and borrow practices from Mathisen and Bronnick's, and Robbins and Kegley's research.

Due to the newness of the construct of *Frontline Service Innovation* there are no extant literature that support the relationship between formal training interventions and the enhancement of this construct per se. The current researcher is however convinced that *Frontline Service Innovation* is a skill that can be taught and propose similar classroom-based training methods to that of the *Emotional Intelligence* and *Creative Self-Efficacy* training that were discussed above, in order to enhance the operationalisation of this construct on frontline level. The content of this training programme could be linked, on item-level, to the *Frontline Service Innovation* measure.



These formal training interventions should be carefully aligned to support the educational levels and contextual factors of the relevant audience (i.e. frontline employees in agricultural organisations in the Western Cape). Most of the local (Western Cape) agricultural retail, trade and services organisations have the ideal infrastructure where either in-house or outsourced classroom-based training sessions can be hosted. Such training should be offered on a regular basis and ideally be supplemented by means of continuous, non-traditional training interventions. E-learning is growing in popularity and could be explored at a later stage as this may present some challenges within developing countries such as South Africa. Further to this, training facilitators should be wary of the language preferences and the cultural variations of the everyday language utilised by the trainees from the rural farming communities of the Western Cape.

Non-traditional training interventions are effective means to transfer and embed the knowledge that was acquired at the formal training level. Coaching, a relatively new development intervention that in the past used to be reserved predominantly for top management, has made its way down to the operational levels of the organisation. As such *Emotional Intelligence*, *Creative Self-Efficacy* and *Frontline Service Innovation* training interventions should thus be supplemented with either the conventional one-on-one coaching or peer coaching as a more cost-effective option. Within the customer services domain, micro-coaching (Cranwell, 2018), also known as on-the-job coaching, is often recommended. This practice is driven by the first line supervisor and entails the utility of real-time performance data, such as customers' feedback, recorded telephone calls or general customer interactions, which could be analysed and discussed on a personal and actionable level. However, not all first line supervisors have mastered the skill of coaching and might require some coaching themselves prior to or whilst coaching their frontline staff.

#### **5.5.4 Organisational Practices**

The results obtained in the study further suggest that by adjusting the design of the frontline employee's job, to incorporate the *Empowering Job Characteristics*, agricultural retail, trade and services organisations may increase the *Creative Self-Efficacy* and in turn the level of *Frontline Service Innovation* of their frontline staff.

In particular, organisations should enhance the autonomy of frontline employees and as such reduce their need to consult supervisors and provide them with a certain amount of leeway (within set parameters) in their customer problem-solving approach and proposed solutions. Although the route from *Psychological Safety* to *Empowering Job Characteristics* was not

evaluated in the current study, an important consideration in this respect, is that initiatives taken by frontline employees should not be met with negative consequences. This may hypothetically inhibit job autonomy and increase the dependence of frontline staff on their supervisors in terms of customer problem-solving.

Further to this, task variety could be enhanced by enlarging the scope of the role of the Frontline Employee. The frontline employees of the agricultural retail, trade and services organisations are generally specialised within a narrow field (e.g. sales assistants within a specific product domain). By increasing the product variety of the sales assistants for instance, these employees could be applied for sales on a broader product level. It is important to emphasise that the notion of a wider product portfolio should be supported with the relevant product knowledge training.

Organisations could also fuel *Creative Self-Efficacy* and as such *Frontline Service Innovation* by providing task identity. That is to design the frontline jobs in such way as to require the employee to complete an entire piece of work. Within the frontline context of agricultural retail, trade and services organisations, frontline employees should be given the opportunity to see the customer's problem through from the beginning of the problem-solving process to the end. This is likely to instil a sense of accomplishment and enable employees to acquire better knowledge of customer's needs. In future, this insight will influence the customer problem-solving process, resulting in more creative solutions (Coelho & Augusto, 2010). Task identity within the customer services domain, may also lead to task significance as the relevant frontline employee, responsible for seeing the customer's problem through to the end, may experience immense gratification when he can or she is able to see and experience the difference or contribution that they have made in the customer's life (Coelho & Augusto).

Feedback, a pillar of *Empowering Job Characteristics*, is one of the simplest interventions, yet so often neglected in organisations. Having a manager, or rather a frontline supervisor in this instance, to systematically assess the performance of each frontline employee presents some logistical challenges. Further to this, it can be even more challenging for the said supervisor to consistently observe and evaluate the frontline employee's customer interactions. Traditional performance feedback is often delayed and consequently less effective as opposed to instant feedback. Therefore, many retail organisations utilise mystery shoppers as a means to provide real-time feedback to frontline employees (Latham, Ford, & Tzabbar, 2012). A mystery shopper is a neutral third party whose identity is unknown to the frontline employees. This shopper visit, and at times phone, the store and assess the performance or services rendered by the frontline employees against set criteria. Although the participating organisation already utilises the mystery shopper method, the current researcher proposes

that they include behaviour that are associated with *Frontline Service Innovation* to the criteria against which they evaluate their frontline employees.

## 5.6 LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

While the researcher believes that this research makes some significant contributions, she acknowledges some limitations. These limitations include challenges of a methodological nature, the psychometric properties of some of the measuring instruments, the conceptualisation and operationalisation of *Frontline Service Innovation*, the operationalisation of *Psychological Safety*, and the absence of modification indices.

The methodological challenges included that of the sample size, the number of participating organisations, method bias due to self-report questionnaires, the language preferences and the cultural variations in the everyday language utilised by the participants. The current researcher is of the opinion that a larger sample size and more participating organisations could potentially have increased the generalisability of the results. She further suggests utilising supervisory ratings to obtain independent measures of the frontline employees' innovation in service delivery as to reduce method bias. Moreover, she recommends a revision of the Afrikaans version of the questionnaire as to improve the cultural accessibility of the items for all Afrikaans respondents within the Western Cape.

Some of the instruments that were utilised in the current study raised some concern, albeit to a varying degree. These instruments were those that measured *Obstacles* (a subscale of *Innovative Organisational Climate*, *Emotional Intelligence*, *Psychological Safety*, *Identifying Customers' Needs* (a subscale of *Frontline Service Innovation*) and *General Job Satisfaction* (a subscale of *Empowering Job Characteristics*). The current researcher recommends revision of these instruments or subscales so as to ensure psychometric soundness.

*Psychological Ownership* and *Psychological Safety's* non-significant relationship with *Frontline Service Innovation* makes one question the conceptualisation and operationalisation of *Frontline Service Innovation*. The utilisation of qualitative interactional analysis might prove effective in delineating the construct and its subdimensions more precisely, which may lead to more effective operationalisation (Frey, Botan, & Kreps, 1999). Other than this, the subscales of *Frontline Service Innovation* could be utilised as the "dependent" variables, as the salience of the antecedents in the structural model may differ in the case of each subscale. One could assume for instance that *Psychological Safety* might show a stronger correlation with the *Innovation* subscale of *Frontline Service Innovation*.

The possible causes for the non-significant direct relationship between *Empowering Leadership* and *Psychological Safety* may require further investigation. The researcher suspects that the *Psychological Safety* measure that was utilised in the current study, operationalised *Psychological Safety* on a collective level whereas *Empowering Leadership* is a dyadic (i.e. measures the relationship between frontline supervisor and the frontline employee) construct. She therefore recommends revision of the *Psychological Safety* measure, on item level, within the given *Frontline Service Innovation* structural model.

The sample size and the characteristics of the measurement model presented restrictions regarding the choice of statistical package and hence the availability of modification indices. It is possible that there are paths in the structural model that are not defined that might reveal additional meaningful relationships between the latent variables. The current researcher therefore suggests that a larger sample is utilised, which could facilitate the utilisation of a statistical package that includes modification indices. Finally, the current researcher would recommend revision of the overall *Frontline Service Innovation* structural model and its delineating constructs and relevant paths.

## 5.7 CHAPTER SUMMARY

The findings of the current study suggest that frontline employees', within an agricultural retail, trade and services organisation, level of *Frontline Service Innovation* is directly affected by *Emotional Intelligence* and *Creative Self-Efficacy*, and indirectly by *Empowering Job Characteristics*. Apart from seemingly being the first study of its kind within South Africa, this study can also be considered a valuable contribution to the literature on *Frontline Service Innovation* on an international level. Overall, the key focus of the current research was to explore the antecedents of *Frontline Service Innovation*. The above sections shed some light on the methodological challenges and the shortcomings of the measurement instruments that were utilised. Subsequently, the *Frontline Service Innovation* structural model and the interactional relationships within this nomological network of variables were discussed. Lastly, the organisational implications were presented, and this chapter concluded with the limitations and recommendations for future research.

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**APPENDIX A: QUESTIONNAIRE**

**BIOGRAPHICAL INFORMATION / BIOGRAFIESE INLIGTING**

Please provide for statistical purposes only, the following information about yourself. Mark the applicable category with an **X** and indicate the **department** which you work in and as well as your **job title** in the open spaces provided in the bottom right hand corner of this page.

*Verskaf asseblief, slegs vir statistieke doeleindes, die volgende inligting oor jouself. Merk die toepaslike kategorie met 'n **X** en dui die **departement** waarin jy werksaam is sowel as jou **posbenaming** in die onderste regterkantste hoek van hierdie bladsy aan.*

<b>Gender/Geslag:</b>	Male/Manlik	<input type="checkbox"/>
	Female/Vroulik	<input type="checkbox"/>
<b>Age/Ouderdom:</b>	18-30 years/jaar	<input type="checkbox"/>
	31-40 years/jaar	<input type="checkbox"/>
	41-50 years/jaar	<input type="checkbox"/>
	51-60 years/jaar	<input type="checkbox"/>
	61-65 years/jaar	<input type="checkbox"/>
<b>Highest qualification obtained/Hoogste kwalifikasie verwerf:</b>	Grade 8 or less/Graad 8 of minder	<input type="checkbox"/>
	Grade 9 - 11/Graad 9-11	<input type="checkbox"/>
	Grade 12/Graad 12	<input type="checkbox"/>
	National certificate/Nasionale sertifikaat	<input type="checkbox"/>
	Diploma/Diploma	<input type="checkbox"/>
	Bachelors degree/Baccalaureusgraad	<input type="checkbox"/>
	Honours degree/Honneursgraad	<input type="checkbox"/>
	Masters degree/Meestersgraad	<input type="checkbox"/>
Doctoral degree/Doktorsgraad	<input type="checkbox"/>	

<b>Language/Taal:</b>	Afrikaans	<input type="checkbox"/>
	Xhosa	<input type="checkbox"/>
	English/Engels	<input type="checkbox"/>
	Venda	<input type="checkbox"/>
	Zulu	<input type="checkbox"/>
	Ndebele	<input type="checkbox"/>
	South Sotho/Suid-Sotho	<input type="checkbox"/>
	North Sotho/Noord-Sotho	<input type="checkbox"/>
	Tsonga	<input type="checkbox"/>
	Tswana	<input type="checkbox"/>
Swazi	<input type="checkbox"/>	
Other/Ander	<input type="checkbox"/>	
<b>What ethnicity do you consider yourself as/As watter etnisiteit ag jy jouself:</b>	Black (African)/Swart	<input type="checkbox"/>
	Coloured/Kleurling	<input type="checkbox"/>
	Wit/White	<input type="checkbox"/>
	Indian/Indiër	<input type="checkbox"/>
	Asian/Asiër	<input type="checkbox"/>

**Department/Departement:** \_\_\_\_\_

**Branch/Tak:** \_\_\_\_\_

**Job Title/Posbenaming:** \_\_\_\_\_

**GENERAL / ALGEMEEN**

When answering the questions for all the questionnaires please remember the following:

*Hou asseblief die volgende in gedagte wanneer jy die vrae van al die vraelyste beantwoord:*

- There are no right or wrong answers.  
*Daar is geen regte of verkeerde antwoord nie.*
- Select only **one** answer for each question.  
*Kies net **een** antwoord per vraag.*
- Make sure you answer every question, even those which do not seem to directly apply to you.  
*Maak seker jy beantwoord elke vraag, selfs die vrae wat nie direk met jou verband hou nie.*
- Do not spend too much time considering your answer to each question. The information given in a question may not be as full as you would wish, but answer as best you can.  
*Moenie te veel tyd, ten einde jou antwoord op elke vraag te besin, spandeer nie. Die inligting wat elke vraag bevat is nie noodwendig so volledig as wat jy sou verkies nie, maar antwoord so goed jy kan.*
- Be as honest and truthful as you can. Don't give an answer just because it seems to be the right thing to say.  
*Wees so eerlik as moontlik. Moenie 'n antwoord verskaf net omdat dit die regte ding is om te sê nie.*

**FRONTLINE SERVICE INNOVATION / KONTAKDIENS-INNOVASIE****INSTRUCTIONS / INSTRUKSIES**

This is a questionnaire concerning your customer contact and service delivery.

*Hierdie vraelys handel oor die kontak met jou kliënt en dienslewering.*

For each statement, indicate to which extent you agree or disagree with the statement. React to each statement by crossing the number of the box that best reflects your views. There are seven possible answers to each statement ranging from **"I strongly agree" (number 7)** to **"I strongly disagree" (number 1)**.

*Dui asseblief by elke stelling aan tot watter mate jy daarmee saamstem of verskil. Reageer op elke stelling deur 'n kruis deur die getal of die blokkie wat jou siening die beste reflekteer te trek. Daar bestaan sewe moontlike antwoorde vir elke stelling wat grens vanaf **"Ek stem volkome saam" (nommer 7)** tot **"Ek verskil volkome" (nommer 1)**.*

**FOR EXAMPLE / BY VOORBEELD:**

Please refer to the example question herewith below. If you moderately disagree with the statement that – "you try to make sure that you have a clear understanding of your customer's need before you seek a solution for his/her problem" - then you mark number 2 on the seven-point scale provided herewith below with an **X**.

*Verwys asseblief na die vraag wat as voorbeeld hieronder dien. Indien jy gedeeltelik verskil met die stelling – "dat jy eers seker maak dat jy die kliënt se behoefte verstaan alvorens jy 'n oplossing vir sy/haar probleem soek" - dan merk jy nommer twee op die sewepuntskaal soos hieronder aangedui met 'n **X**.*

<b>EXAMPLE / VOORBEELD</b>	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
Before I seek a solution to my customer's problem, I first make sure that I have a clear understanding of his/her need <i>Alvorens ek 'n oplossing vir my kliënt se probleem soek, maak ek seker dat ek eers sy/haar behoefte goed verstaan</i>	7	6	5	4	3	<del>2</del>	1

<b>IDENTIFYING CUSTOMER'S NEEDS / IDENTIFISEER KLIËNTE SE BEHOEFTE</b>	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
1. During a service experience, I usually try to "put myself in the customer's shoes" <i>Tydens 'n dienservaring probeer ek gewoonlik om "myself in die kliënt se skoene te plaas"</i>	7	6	5	4	3	2	1
2. I try to understand the customer's point of view when delivering a service experience <i>Ek probeer die kliënt se standpunt insien wanneer ek 'n dienservaring lewer</i>	7	6	5	4	3	2	1
3. I quickly grasp the customer's expressed needs <i>Ek snap vinnig die kliënt se behoeftes wat uitgedruk is</i>	7	6	5	4	3	2	1
4. I believe that I have the ability to clarify the customers' needs <i>Ek glo ek het die vermoë om die kliënt se behoeftes uit te klaar</i>	7	6	5	4	3	2	1
5. I actively try to discover the needs of the customer whilst engaging with him or her <i>Ek probeer aktief om die kliënt se behoeftes te ontdek tydens my interaksie met hom of haar</i>	7	6	5	4	3	2	1
6. I can infer the customer's needs even though he/she has not fully voiced it <i>Ek kan die kliënt se behoeftes aflei, al het sy/hy dit nie ten volle uitgespreek nie</i>	7	6	5	4	3	2	1

<b>INNOVATION / INNOVASIE</b>		Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
7.	I frequently come up with creative solutions to customers' problems <i>Ek kom gereeld met kreatiewe oplossings vir kliënte se probleme vorendag</i>	7	6	5	4	3	2	1
8.	Whilst serving the customer I'm innovative in overcoming their obstacles that they experience <i>Terwyl ek kliënte bedien, is ek innoverend in maniere om struikelblokke wat kliënte ervaar, te oorkom</i>	7	6	5	4	3	2	1
9.	I experiment with new approaches to customers' problems <i>Ek eksperimenteer met nuwe benaderings tot kliënte se probleme</i>	7	6	5	4	3	2	1
10.	My boss feels that I apply creative solutions to my customers' needs <i>My baas is van mening dat ek kreatiewe oplossings vir my kliënte se behoeftes vind</i>	7	6	5	4	3	2	1
11.	My customers are usually very pleased with the solutions that I propose <i>My kliënte is gewoonlik baie tevrede met die oplossings wat ek voorstel</i>	7	6	5	4	3	2	1

<b>ADAPTIVE SERVICE OFFERING / AANGEPASTE DIENSAANBIEDING</b>		Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
12.	I usually adapt the type of service to meet the unique needs of each customer <i>Ek pas gewoonlik die soort diens by die unieke behoeftes van elke kliënt aan</i>	7	6	5	4	3	2	1
13.	I shape a service experience to meet a customer's needs <i>Ek skep 'n dienservaring om in 'n kliënt se behoeftes te voorsien</i>	7	6	5	4	3	2	1
14.	I modify my normal way of doing things in order to meet the individual needs of a customer <i>Ek pas my normale manier van doen aan om in die individuele behoeftes van 'n kliënt te voorsien</i>	7	6	5	4	3	2	1
15.	I'm prepared to change our normal approach completely to meet the needs of the client <i>Ek is bereid om ons normale benadering totaal te verander om in die behoeftes van 'n kliënt te voorsien</i>	7	6	5	4	3	2	1



ADAPTIVE SERVICE OFFERING (continue) / AANGEPASTE DIENSAANBIEDING (vervolg)	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
16. I believe that each customer requires a unique approach <i>Ek glo dat elke kliënt 'n unieke benadering verg</i>	7	6	5	4	3	2	1
17. I always present the customer with a realistic picture of what my firm can do <i>Ek skets altyd vir die kliënt 'n realistiese prentjie van wat my firma kan doen</i>	7	6	5	4	3	2	1
18. I wait until I fully understand the customer's needs before making my presentation <i>Ek wag tot ek die kliënt se behoeftes heeltemal verstaan voordat ek my aanbieding doen</i>	7	6	5	4	3	2	1
19. I am always straightforward in discussions with my customers <i>Ek is altyd reguit in my besprekings met kliënte</i>	7	6	5	4	3	2	1
20. I try to determine how I can best help the customer solve his/her problem <i>Ek probeer vasstel hoe ek die kliënt ten beste kan help om sy/haar probleem op te los</i>	7	6	5	4	3	2	1

**PSYCHOLOGICAL OWNERSHIP / SIELKUNDIGE EIENAARSKAP****INSTRUCTIONS / INSTRUKSIES**

Think about the home, boat or vacation home that you own or co-own with someone, and the experiences and feelings associated with the statement 'THIS IS MY (OUR) HOUSE!' The following questions deal with the 'sense of ownership' that you feel for the job that you perform.

*Dink na oor die huis, boot of vakansiehuis wat jy alleen of saam met iemand besit en die ervarings en gevoelens wat met die stelling 'DIT IS MY (ONS) HUIS!' geassosieer word. Die volgende vrae handel oor die 'sin van eienaarskap' wat jy teenoor die pos wat jy tans beklee ervaar.*

For each statement, indicate to which extent you agree or disagree with the statement. React to each statement by crossing the number of the box that best reflects your views. There are seven possible answers to each statement ranging from "I strongly agree" (number 7) to "I strongly disagree" (number 1).

*Dui asseblief by elke stelling aan tot watter mate jy daarmee saamstem of verskil. Reageer op elke stelling deur 'n kruis deur die getal of die blokkie wat jou siening die beste reflekteer te trek. Daar bestaan sewe moontlike antwoorde vir elke stelling wat grens vanaf "Ek stem volkome saam" (nommer 7) tot "Ek verskil volkome" (nommer 1).*

**FOR EXAMPLE / BY VOORBEELD:**

Please refer to the example question herewith below. If you strongly agree with the statement that – I feel that this job belongs to me – then you mark number 7 on the seven-point scale provided herewith below with an **X**.

*Verwys asseblief na die vraag wat as voorbeeld hieronder dien. Indien jy volkome saamstem met die stelling – Ek voel dat hierdie pos aan my behoort – dan merk jy nommer sewe op die sewepuntskaal soos hieronder aangedui met 'n **X**.*

EXAMPLE / VOORBEELD	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
I feel that this job belongs to me <i>Ek voel dat hierdie werk aan my behoort</i>	<del>7</del>	6	5	4	3	2	1

<b>PSYCHOLOGICAL OWNERSHIP / SIELKUNDIGE EIENAARSKAP</b>		Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
1.	I sense that this job is MINE <i>Ek voel dat hierdie werk MYNE is</i>	7	6	5	4	3	2	1
2.	I feel a very high degree of personal ownership for this job <i>Ek ervaar 'n hoë mate van persoonlike eienaarskap vir hierdie werk</i>	7	6	5	4	3	2	1
3.	I sense that this is MY job <i>Ek voel dat dit MY werk is hierdie</i>	7	6	5	4	3	2	1
4.	I sense that the work I do as part of my job is MINE <i>Ek voel dat die werk/take wat ek verrig as deel van hierdie werk MYNE is</i>	7	6	5	4	3	2	1
5.	I feel a very high degree of personal ownership for the work that I do <i>Ek voel 'n hoë mate van persoonlike eienaarskap vir die werk/take wat ek verrig</i>	7	6	5	4	3	2	1
6.	The work I do at this organisation is MINE <i>Die werk wat ek by hierdie organisasie verrig, is MYNE</i>	7	6	5	4	3	2	1

**EMOTIONAL INTELLIGENCE / EMOSIONELE INTELLIGENSIE****INSTRUCTIONS / INSTRUKSIES**

Indicate the extent to which each statement applies to you using the following scale:

*Dui aan tot watter mate elk van die stellings van jou op toepassing is deur die gebruik van die volgende skaal:*

1 = strongly disagree / 1 = *verskil volkome*

2 = disagree / 2 = *verskil*

3 = neutral / 3 = *neutraal*

4 = agree / 4 = *stem saam*

5 = strongly agree / 5 = *stem volkome saam*

<b>SCHUTTE EMOTIONAL INTELLIGENCE SURVEY / SCHUTTE EMOSIONELE INTELLIGENSIE VRAELYS</b>		Strongly agree  <i>Stem volkome saam</i>	Agree  <i>Stem saam</i>	Neutral  <i>Neutraal</i>	Disagree  <i>Verskil</i>	Strongly disagree  <i>Verskil volkome</i>
1.	I know when to speak about my personal problems to others <i>Ek weet wanneer om my persoonlike probleme met ander te bespreek</i>	5	4	3	2	1
2.	When I am faced with obstacles, I remember times I faced similar obstacles and overcame them <i>Wanneer ek struikelblokke teëkom, dink ek aan tye toe ek soortgelyke struikelblokke teëgekóm en oorkóm het</i>	5	4	3	2	1
3.	I expect I will do well on most things I try <i>Ek verwag om goed te vaar in die meeste dinge wat ek aanpak</i>	5	4	3	2	1
4.	Other people find it easy to confide in me <i>Ander mense vind dit maklik om vertroulike dinge met my te deel</i>	5	4	3	2	1
5.	I find it hard to understand the non-verbal messages of other people* <i>Ek vind dit moeilik om ander mense se nie-verbale boodskappe te verstaan*</i>	5	4	3	2	1
6.	Some of the major events of my life have led me to re-evaluate what is important and not important <i>Sommige van die groot gebeure in my lewe het daartoe gelei dat ek herbesin oor wat belangrik is en wat nie</i>	5	4	3	2	1

<b>SCHUTTE EMOTIONAL INTELLIGENCE SURVEY (continue) / SCHUTTE EMOSIONELE INTELLIGENSIE VRAELYS (vervolg)</b>	Strongly agree <i>Stem volkome saam</i>	Agree <i>Stem saam</i>	Neutral <i>Neutraal</i>	Disagree <i>Verskil</i>	Strongly disagree <i>Verskil volkome</i>
7. When my mood changes, I see new possibilities <i>Wanneer my bui verander, sien ek nuwe moontlikhede raak</i>	5	4	3	2	1
8. Emotions are one of the things that make my life worth living <i>Emosies is een van die dinge wat my lewe die moeite werd maak</i>	5	4	3	2	1
9. I am aware of my emotions as I experience them <i>Ek is bewus van die emosies wat ek beleef</i>	5	4	3	2	1
10. I expect good things to happen <i>Ek verwag dat goeie dinge sal gebeur</i>	5	4	3	2	1
11. I like to share my emotions with others <i>Ek deel graag my emosies met ander</i>	5	4	3	2	1
12. When I experience a positive emotion, I know how to make it last <i>Wanneer ek 'n positiewe emosie ervaar, weet ek hoe om dit te laat voortduur</i>	5	4	3	2	1
13. I arrange events others enjoy <i>Ek reël geleenthede wat ander mense geniet</i>	5	4	3	2	1
14. I seek out activities that make me happy <i>Ek neem deel aan aktiwiteite wat my gelukkig maak</i>	5	4	3	2	1
15. I am aware of the non-verbal messages I send to others <i>Ek is bewus van die nie-verbale boodskappe wat ek aan ander stuur</i>	5	4	3	2	1
16. I present myself in a way that makes a good impression to others <i>Ek tree so op dat ek'n goeie indruk op ander maak</i>	5	4	3	2	1
17. When I am in a positive mood, solving problems is easy for me <i>Wanneer ek in 'n positiewe bui is, vind ek dit maklik om probleme op te los</i>	5	4	3	2	1
18. By looking at their facial expressions, I recognise the emotions people are experiencing <i>Deur na hul gesigsuitdrukings te kyk, kan ek uitken watter emosies mense ervaar</i>	5	4	3	2	1
19. I know why my emotions change <i>Ek weet waarom my emosies verander</i>	5	4	3	2	1

<b>SCHUTTE EMOTIONAL INTELLIGENCE SURVEY (continue) / SCHUTTE EMOSIONELE INTELLIGENSIE VRAELYS (vervolg)</b>	Strongly agree <i>Stem volkome saam</i>	Agree <i>Stem saam</i>	Neutral <i>Neutraal</i>	Disagree <i>Verskil</i>	Strongly disagree <i>Verskil volkome</i>
20. When I am in a positive mood, I am able to come up with new ideas <i>Wanneer ek in 'n positiewe bui is, is ek in staat om met nuwe idees vorendag te kom</i>	5	4	3	2	1
21. I have control over my emotions <i>Ek het beheer oor my emosies</i>	5	4	3	2	1
22. I easily recognise my emotions as I experience them <i>Ek herken maklik die emosies wat ek beleef</i>	5	4	3	2	1
23. I motivate myself by imagining a good outcome to tasks I take on <i>Ek motiveer myself deur 'n goeie uitkoms vir die take wat ek aanpak te verbeel</i>	5	4	3	2	1
24. I complement others when they have done something well <i>Ek komplimenteer ander wanneer hulle iets goed gedoen het</i>	5	4	3	2	1
25. I am aware of the non-verbal messages other people send <i>Ek is bewus van die nie-verbale boodskappe wat ander mense stuur</i>	5	4	3	2	1
26. When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself <i>Wanneer 'n ander persoon my van 'n belangrike gebeurtenis in sy of haar lewe vertel, voel ek amper asof ek hierdie gebeurtenis self beleef het</i>	5	4	3	2	1
27. When I feel a change in emotions, I tend to come up with new ideas <i>Wanneer ek 'n verandering in emosies ervaar, is ek geneig om met nuwe idees vorendag te kom</i>	5	4	3	2	1
28. When I am faced with a challenge, I give up because I believe I will fail* <i>Wanneer ek 'n uitdaging teëkom, gooi ek tou op omdat ek glo ek gaan misluk*</i>	5	4	3	2	1
29. I know what other people are feeling just by looking at them <i>Ek weet hoe ander mense voel deur bloot na hulle te kyk</i>	5	4	3	2	1
30. I help other people feel better when they are down <i>Ek beur ander mense op wanneer hulle neerslagtig voel</i>	5	4	3	2	1
31. I use good moods to help myself keep trying in the face of obstacles <i>Ek gebruik goeie buie om myself te help aanhou probeer wanneer daar struikelblokke is</i>	5	4	3	2	1

<b>SCHUTTE EMOTIONAL INTELLIGENCE SURVEY (continue) / SCHUTTE EMOSIONELE INTELLIGENSIE VRAELYS (vervolg)</b>	Strongly agree <i>Stem volkome saam</i>	Agree <i>Stem saam</i>	Neutral <i>Neutraal</i>	Disagree <i>Verskil</i>	Strongly disagree <i>Verskil volkome</i>
32. I can tell how people are feeling by listening to the tone of their voice <i>Ek kan aanvoel hoe mense voel deur na hul stemtoon te luister</i>	5	4	3	2	1
33. It is difficult for me to understand why people feel the way they do* <i>Dit is moeilik vir my om te verstaan waarom mense voel soos wat hulle voel*</i>	5	4	3	2	1

**EMPOWERING JOB CHARACTERISTICS / BEMAGTIGENDE POSEIENSKAPPE**

**Section 1 / Afdeling 1**

This part of the questionnaire asks you to **describe your job** as *objectively* as you can.  
*Hierdie gedeelte van die vraelys versoek jou om **jou werk** so objektief moontlik te beskryf.*

Please do not use this part of the questionnaire to show how much you like or dislike your job. Questions about that will come later. Instead, try to make your descriptions as accurate and as objective as you possibly can.  
*Moet asseblief nie hierdie gedeelte van die vraelys gebruik om die mate waarin jy van jou werk hou te beskryf nie. Vrae in hierdie verband sal later gevra word. Probeer eerder om jou beskrywings so akuraat en objektief moontlik te hou.*

A sample question reads:  
*Die volgende vraag dien as voorbeeld:*

To what extent does your job require you to work with mechanical equipment? <i>Tot welke mate vereis jou pos dat jy met meganiese toerusting werk?</i>	Very much; the job requires almost constant work with mechanical equipment. <i>Tot 'n groot mate; die pos vereis konstante gebruik van meganiese toerusting.</i>	To a reasonable extent. <i>Tot 'n redelike mate.</i>	Slightly more than moderately. <i>Effens meer as gematigd.</i>	Moderately. <i>Gematig.</i>	Slightly less than moderately. <i>Effens minder as gematigd.</i>	To a limited extent. <i>Tot 'n beperkte mate.</i>	Very little; the job requires almost no contact with mechanical equipment. <i>Baie min; die pos vereis byna geen kontak met meganiese toerusting nie.</i>
	7	<del>6</del>	5	4	3	2	1

If, for example, your job requires you to work with mechanical equipment a good deal of the time – but also requires some paperwork – you might indicate a number 6.  
*Indien jou pos, bevoorbeeld, vereis dat jy tot 'n groot mate meganiese toerusting gebruik – maar ook tot 'n mate papierwerk vereis – sal jy moontlik die getal 6 merk.*

If you do not understand these instructions, please ask for assistance.  
*Indien jy nie hierdie instruksies verstaan nie, vra asseblief om hulp.*



<p>1. How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing the work?</p> <p><i>Hoeveel outonomie is daar in jou pos? Dit is, tot watter mate laat jou pos jou toe om op jou eie te besluit hoe om die werk te verrig?</i></p>	<p>Very much; the job gives me almost complete responsibility for deciding how and when the work is done.</p> <p><i>Tot 'n groot mate; die pos gee my byna volkome verantwoordelikheid om te besluit hoe en wanneer die werk verrig word</i></p>	<p>To a reasonable extent.</p> <p><i>Tot 'n redelike mate.</i></p>	<p>Slightly more than moderately.</p> <p><i>Effens meer as gematigd.</i></p>	<p>Moderate autonomy; many things are standardised and not under my control, but I can make some decisions about the work.</p> <p><i>Gematigde outonomie; baie goed is gestandaardiseerd en buite my beheer, maar ek kan steeds sekere besluite oor die werk neem</i></p>	<p>Slightly less than moderately.</p> <p><i>Effens minder as gematigd.</i></p>	<p>To a limited extent.</p> <p><i>Tot 'n beperkte mate.</i></p>	<p>Very little; the job gives me almost no personal "say" about how and when the work is done</p> <p><i>Baie min; die pos bied my amper geen persoonlike "sê" oor hoe en wanneer die werk verrig word nie</i></p>
	7	6	5	4	3	2	1

<p>2. To what extent does your job involve doing a "whole" and identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or by automatic machines?</p> <p><i>Tot watter mate behels jou werk 'n "volledige" en identifiseerbare stuk werk? Dit is, is die pos 'n volledige stuk werk wat 'n duidelike begin en eindpunt insluit? Of is die stuk werk slegs 'n klein gedeelte van 'n geheel wat deur ander mense of deur outomatiese masjinerie voltooi word?</i></p>	<p>Very much; I am personally responsible for the whole job</p> <p><i>Tot 'n groot mate; ek is persoonlik verantwoordelik vir al die aspekte van die werk</i></p>	<p>To a reasonable extent.</p> <p><i>Tot 'n redelike mate.</i></p>	<p>Slightly more than moderately.</p> <p><i>Effens meer as gematigd.</i></p>	<p>Moderate responsibility: I am not solely responsible for the job.</p> <p><i>Gematigde outonomie; Ek is nie vir al die aspekte van die werk verantwoordelik nie.</i></p>	<p>Slightly less than moderately.</p> <p><i>Effens minder as gematigd.</i></p>	<p>To a limited extent.</p> <p><i>Tot 'n beperkte mate.</i></p>	<p>Very little; there are only a few aspects of the job that I am responsible for.</p> <p><i>Baie min; ek is slegs vir enkele aspekte van die werk verantwoordelik.</i></p>
	7	6	5	4	3	2	1

<p>3. How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?</p> <p><i>Hoeveel verskeidenheid is daar in jou pos? Dit is, tot watter mate vereis jou pos jou om 'n verskeidenheid van dinge by die werk te verrig, deur die aanwending van 'n verskeidenheid van jou vaardighede en talente?</i></p>	<p>Very much; the job requires me to do many different things, using a number of different skills and talents.</p> <p><i>Tot 'n groot mate; die pos vereis my om baie verskillende dinge, deur die aanwending van verskeie vaardighede en talente, te verrig.</i></p>	<p>To a reasonable extent.</p> <p><i>Tot 'n redelike mate.</i></p>	<p>Slightly more than moderately.</p> <p><i>Effens meer as gematigd.</i></p>	<p>Moderate variety.</p> <p><i>Gematigde verskeidenheid.</i></p>	<p>Slightly less than moderately.</p> <p><i>Effens minder as gematigd.</i></p>	<p>To a limited extent.</p> <p><i>Tot 'n beperkte mate.</i></p>	<p>Very little; the job requires me to do the same routine things over and over again.</p> <p><i>Baie min; die pos vereis dat dieselfde herhalende take oor en oor verrig word.</i></p>
	7	6	5	4	3	2	1

<p>4. In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?</p> <p><i>Oor die algemeen, hoe beduidend of belangrik is jou werk? Dit is, sal jou werksresultate waarskynlik 'n beduidende effek op die lewe en welstand van ander mense hê?</i></p>	<p>Highly significant; the outcomes of my work can affect other people in very important ways.</p> <p><i>Baie beduidend; die uitkomst van my werk kan ander mense op 'n belangrike wyse affekteer.</i></p>	<p>Reasonably significant.</p> <p><i>Redelik beduidend.</i></p>	<p>Slightly more than moderately significant.</p> <p><i>Effens meer as gematigd beduidend.</i></p>	<p>Moderately significant.</p> <p><i>Gematig beduidend.</i></p>	<p>Slightly less than moderately significant.</p> <p><i>Effens minder as gematigd beduidend.</i></p>	<p>Limited significance.</p> <p><i>Beperkte beduidendheid.</i></p>	<p>Not very significant; the outcomes of my work are not likely to have important effects on other people.</p> <p><i>Nie baie beduidend nie; die waarskynlikheid dat die uitkomst van my werk 'n belangrike effek op ander mense sal hê is baie klein!</i></p>
	7	6	5	4	3	2	1

<p>5. To what extent does doing the job itself provide you with information about your work performance? That is, does the actual work itself provide clues about how well you are doing – aside from any “feedback” co-workers or supervisors may provide?</p> <p><i>Tot watter mate verskaf die verrigting van die pos self jou met inligting oor jou werkspresiasie? Dit is, verskaf die werk self jou met enige leidrade oor hoe goed jy vaar – ongeag die “terugvoering” wat jy vanaf mede-kollegas en toesighouers ontvang?</i></p>	<p>Very much; the job is set up so that I get almost constant “feedback” as I work about how well I am doing.</p> <p><i>Tot ‘n groot mate; die pos is so opgestel dat ek byna konstante “terugvoering” ontvang ten einde te bepaal hoe goed ek vorder.</i></p>	<p>To a reasonable extent.</p> <p><i>Tot ‘n redelike mate.</i></p>	<p>Slightly more than moderately.</p> <p><i>Effens meer as gematigd.</i></p>	<p>Moderately; sometimes the job provides “feedback” to me; sometimes it does not.</p> <p><i>Gematig, soms verskaf die verrigting van die pos my met “terugvoering” en soms verskaf dit nie.</i></p>	<p>Slightly less than moderately.</p> <p><i>Effens minder as gematigd.</i></p>	<p>To a limited extent.</p> <p><i>Tot ‘n beperkte mate.</i></p>	<p>Very little; the job itself is set up so that I could work forever without finding out how well I am doing.</p> <p><i>Baie min, die pos self is so opgestel dat ek tot in ewigheid kan werk sonder om uit te vind hoe ek vaar.</i></p>
	7	6	5	4	3	2	1

## Section 2 / Afdeling 2

Listed below are a number of statements which could be used to describe a job.  
*Hieronder word ‘n aantal stellings, wat gebruik kan word om ‘n werk te beskryf, verskaf.*

Please indicate whether each statement is an accurate or an inaccurate description of your job.  
*Dui asseblief aan of elk van hierdie stellings ‘n akkurate of verkeerde beskrywing van jou pos is.*

Once again, please try to be as objective as you can in deciding how accurately each statement describes your job – regardless of whether you like or dislike your job.  
*Weereens, probeer asseblief om so objektief moontlik te wees wanneer jy beoordeel tot watter mate elke stelling jou pos akkuraat beskryf.*

How accurate is the statement in describing your job? <i>Hoe akkuraat beskryf die volgende stellings jou pos?</i>	Very accurate <i>Baie akkuraat</i>	Mostly accurate <i>Meestal akkuraat</i>	Slightly accurate <i>Effens akkuraat</i>	Uncertain <i>Onseker</i>	Slightly inaccurate <i>Effens onakkuraat</i>	Mostly inaccurate <i>Meestal onakkuraat</i>	Very inaccurate <i>Baie onakkuraat</i>
1. The job requires me to use a number of complex or higher-level skills. <i>Die pos vereis van my om 'n aantal komplekse of hoër orde vaardighede toe te pas.</i>	7	6	5	4	3	2	1
2. This job is arranged so that I can do an entire piece of work from beginning to end. <i>Hierdie pos is so saamgestel dat ek 'n volledige stuk werk van begin tot einde kan verrig.</i>	7	6	5	4	3	2	1
3. Just doing the work required by the job provides many chances for me to figure out how well I am doing. <i>Deur bloot die werk wat deur die pos vereis word te verrig, bied baie geleentheid vir my om vas te stel hoe goed ek vaar.</i>	7	6	5	4	3	2	1
4. This job allows me to use a number of complex or high-level skills. <i>Die pos laat my toe om 'n aantal komplekse en hoër orde vaardighede toe te pas.</i>	7	6	5	4	3	2	1
5. This job is one where a lot of other people can be affected by how well the work gets done. <i>Hierdie werk is van so 'n aard dat baie ander mense, deur die mate waartoe die werk goed verrig word, beïnvloed word.</i>	7	6	5	4	3	2	1
6. The job gives me a chance to use my personal initiative and judgement in carrying out the work. <i>Die pos bied vir my die geleentheid om my persoonlike inisiatief en oordeel tydens werksverrigting te gebruik.</i>	7	6	5	4	3	2	1
7. This job provides me with the chance to completely finish the pieces of work that I begin. <i>Hierdie pos bied my die geleentheid om die stukke werk waarmee ek begin ook heeltemal te voltooi.</i>	7	6	5	4	3	2	1
8. After I finish a job, I know whether I performed well. <i>Nadat ek werk afhandel het, weet ek of ek goed presteer het.</i>	7	6	5	4	3	2	1
9. The job gives me considerable opportunity for independence and freedom in how I do the work. <i>Hierdie pos bied genoegsame geleentheid vir onafhanklikheid en vryheid oor die wyse waarop die werk verrig word.</i>	7	6	5	4	3	2	1
10. The job itself is very significant and important in the broader scheme of things. <i>Hierdie pos is binne die groter prentjie baie beduidend en belangrik.</i>	7	6	5	4	3	2	1

**Section 3 / Afdeling 3**

Now please indicate how you personally feel about your job.  
*Dui asseblief aan hoe jy persoonlik oor jou pos voel.*

Each of the statements below is something that a person might say about his or her job. Please indicate your own personal feelings about your job by indicating to what extent you agree with each of the statements.

*Elk van die stellings hieronder beskryf iets wat 'n persoon dalk oor sy of haar pos mag sê. Dui asseblief jou eie persoonlike gevoelens oor jou pos aan deur aan te dui tot watter mate jy met elk van die stellings saamstem.*

How much do you agree with the statement? <i>Tot watter mate stem jy met die stelling saam?</i>	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
1. My opinion of myself goes up when I do this job well. <i>My opinie van myself neem toe wanneer ek die werk goed verrig.</i>	7	6	5	4	3	2	1
2. Generally speaking, I am very satisfied with this job. <i>Oor die algemeen is ek baie tevrede met hierdie werk.</i>	7	6	5	4	3	2	1
3. I feel a great sense of personal satisfaction when I do this job well. <i>Ek ervaar 'n groot sin van persoonlike bevrediging wanneer ek hierdie werk goed verrig.</i>	7	6	5	4	3	2	1
4. I seldom think of quitting this job. <i>Ek dink selde daaraan om uit hierdie pos te bedank.</i>	7	6	5	4	3	2	1
5. I feel good and happy when I discover that I have performed well on this job. <i>Ek voel goed en gelukkig wanneer ek ontdek dat ek goed in my werk presteer het.</i>	7	6	5	4	3	2	1
6. I am generally satisfied with the kind of work I do in this job. <i>Ek is oor die algemeen tevrede met die tipe werk wat ek in hierdie pos verrig.</i>	7	6	5	4	3	2	1
7. My own feelings are generally affected by how well I do in this job. <i>Die mate waartoe ek my werk goed verrig beïnvloed oor die algemeen my eie gevoelens.</i>	7	6	5	4	3	2	1

**Section 4 / Afdeling 4**

Now please indicate how satisfied you are with each aspect of our job listed below.  
*Dui asseblief aan tot watter mate jy tevrede is met elk van die aspekte van jou werk soos hieronder gelys.*

How satisfied are you with this aspect of your job? <i>Tot watter is jy tevrede met hierdie aspek van jou werk?</i>	Extremely satisfied <i>Uiters tevrede</i>	Satisfied <i>Tevrede</i>	Slightly satisfied <i>Effens tevrede</i>	Neutral <i>Neutraal</i>	Slightly dissatisfied <i>Effens ontevrede</i>	Dissatisfied <i>Ontevrede</i>	Extremely dissatisfied <i>Uiters ontevrede</i>
1. The amount of personal growth and development I get in doing my job. <i>Die mate van persoonlike groei en ontwikkeling wat ek vanuit my pos verkry.</i>	7	6	5	4	3	2	1
2. The feeling of worthwhile accomplishment I get from doing my job. <i>Wanneer ek my werk verrig kry ek die gevoel dat ek iets reggekry het wat die moeite werd is.</i>	7	6	5	4	3	2	1
3. The amount of independent thought and action I can exercise in my job. <i>Die mate van onafhanklike denke en aksie wat ek in my werk kan toepas.</i>	7	6	5	4	3	2	1
4. The amount of challenge in my job. <i>Die hoeveelheid uitdagings in my werk.</i>	7	6	5	4	3	2	1

**Section 5 / Afdeling 5**

Now please think of the other people in your organisation who hold the same job that you do. If no one has exactly the same job as you, think of the job which is most similar to yours.  
*Dink asseblief aan ander mense in jou organisasie wat dieselfde pos as jy beklee. Indien niemand presies dieselfde pos as jy beklee nie, dink aan 'n pos wat naasteby met joune ooreenstem.*

Please think about how accurately each of the statements describes the feelings of those people about the job and select a number on the seven-point scale herewith below.  
*Besin asseblief oor hoe akkuraat elk van die stellings die gevoelens van daardie mense wat die pos beklee beskryf en kies 'n getal op die sewepuntskaal hieronder.*

It is quite all right if your answers here are different from when you described your own reactions to the job. Often different people feel quite differently about the same job.  
*Dit is in orde indien jou antwoorde hier verskil van hoe jy jou eie reaksies tot die pos beskryf het. Mense se gevoelens oor dieselfde pos verskil dikwels.*

How much do you agree with the statement? <i>Tot watter mate stem jy met die stelling saam?</i>	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
1. Most people in this job feel a great sense of personal satisfaction when they do the job well. <i>Meeste mense in hierdie pos ervaar 'n sin van persoonlike bevrediging wanneer hulle die werk goed verrig.</i>	7	6	5	4	3	2	1
2. Most people in this job are very satisfied with the job. <i>Meeste mense in hierdie pos is baie tevrede met die pos.</i>	7	6	5	4	3	2	1
3. People in this job seldom think of quitting. <i>Mense in hierdie pos dink selde daaraan om te bedank.</i>	7	6	5	4	3	2	1
4. Most people in this job feel good or happy when they find that they have performed the work well. <i>Meeste mense in hierdie pos voel goed of gelukkig wanneer hulle uitvind dat hulle die werk goed verrig het.</i>	7	6	5	4	3	2	1

**INNOVATIVE ORGANISATIONAL CLIMATE / INNOVERENDE ORGANISASIEKLIMAAT****INSTRUCTIONS / INSTRUKSIES**

Please read the following statements and rate “how often true” each specific statement is of your current work environment. The following scales will be used:  
*Lees asseblief die volgende stelings en beoordeel “hoe gereeld waar” elk van die spesifieke stellings van jou huidige werksomgewing is. Die volgende skale moet gebruik word:*

Never or almost never = 1 / *Nooit of byna nooit = 1*

Sometimes = 2 / *Soms = 2*

Often = 3 / *Gereeld = 3*

Always or almost always = 4 / *Altyd of byna altyd = 4*

<b>ABBREVIATED KEYS/ VERKORTE KEYS</b>	Never or almost never <i>Nooit of byna nooit</i>	Sometimes <i>Soms</i>	Often <i>Gereeld</i>	Always or almost always <i>Altyd of byna altyd</i>
1. Are new ideas encouraged in this organisation? <i>Word nuwe idees in hierdie organisasie aangemoedig?</i>	1	2	3	4
2. Are people recognised for creative problem solving in this organisation? <i>Kry mense erkenning vir kreatiewe probleemoplossing in hierdie organisasie?</i>	1	2	3	4
3. Are people rewarded for creative problem solving in this organisation? <i>Word mense beloon vir kreatiewe probleemoplossing in hierdie organisasie?</i>	1	2	3	4
4. Does my boss clearly set overall goals for me? <i>Het my baas vir my duidelike algemene doelwitte gestel?</i>	1	2	3	4
5. Does my boss have good interpersonal skills? <i>Het my baas goeie interpersoonlike vaardighede?</i>	1	2	3	4
6. Does my boss support me within the organisation? <i>Ondersteun my baas my binne die organisasie?</i>	1	2	3	4



<b>ABBREVIATED KEYS (continue) / VERKORTE KEYS (vervolg)</b>	Never or almost never  <i>Nooit of byna nooit</i>	Sometimes  <i>Soms</i>	Often  <i>Gereeld</i>	Always or almost always  <i>Altyd of byna altyd</i>
7. Is there a feeling of trust among the people I work with most closely? <i>Is daar 'n gevoel van vertroue onder die mense met wie ek die nouste saamwerk?</i>	1	2	3	4
8. Am I able to easily get materials I need to do my work? <i>Kan ek maklik die materiale wat ek nodig het in die hande kry om my werk te doen?</i>	1	2	3	4
9. Are the task(s) in my work challenging? <i>Is die take wat my werk behels uitdagend?</i>	1	2	3	4
10. Do I have freedom to decide how I am going to solve problems? <i>Het ek die vryheid om te besluit hoe ek probleme gaan oplos?</i>	1	2	3	4
11. Are there political problems in this organisation? * <i>Is daar politieke probleme in hierdie organisasie? *</i>	1	2	3	4
12. Are people critical of new ideas in this organisation? * <i>Is mense krities teenoor nuwe idees in hierdie organisasie? *</i>	1	2	3	4
13. Do I feel a sense of time pressure in my work? * <i>Beleef ek 'n gevoel van tydsdruk in my werk? *</i>	1	2	3	4
14. Are there realistic expectations for what people can achieve in this organisation? <i>Is daar realistiese verwagtinge van wat mense kan vermag in hierdie organisasie?</i>	1	2	3	4
15. My organisation is creative <i>My organisasie is kreatief</i>	1	2	3	4
16. I believe that I am currently creative in my work <i>Ek glo ek is tans kreatief in my werk</i>	1	2	3	4
17. My frontline colleagues are productive <i>My kontakwerker-kollegas is produktief</i>	1	2	3	4
18. Overall this organisation is productive <i>Die organisasie is in die algemeen produktief</i>	1	2	3	4

**PSYCHOLOGICAL SAFETY / SIELKUNDIGE VEILIGHEID****INSTRUCTIONS / INSTRUKSIES**

The following questions deal with the 'sense of safety' that you feel within the organisation.

*Die volgende vrae handel oor die 'sin van veiligheid' wat jy binne die organisasie waar jy werk ervaar.*

For each statement, indicate to which extent you agree or disagree with the statement. React to each statement by crossing the number of the box that best reflects your views. There are seven possible answers to each statement ranging from "I strongly agree" (number 7) to "I strongly disagree" (number 1).

*Dui asseblief by elke stelling aan tot watter mate jy daarmee saamstem of verskil. Reageer op elke stelling deur 'n kruis deur die getal of die blokkie wat jou siening die beste reflekteer te trek. Daar bestaan sewe moontlike antwoorde vir elke stelling wat grens vanaf "Ek stem volkome saam" (nommer 7) tot "Ek verskil volkome" (nommer 1).*

**FOR EXAMPLE / BY VOORBEELD:**

Please refer to the example question herewith below. If you slightly agree with the statement that – "my opinion is respected by other members of this organisation" –then you mark number five on the seven-point scale provided herewith below with an X.

*Verwys asseblief na die vraag wat as voorbeeld hieronder dien. Indien jy effens met die stelling – "my opinie word deur ander lede van hierdie organisasie gerespekteer" – saam stem, dan merk jy nommer vyf op die sewepuntskaal soos hieronder aangedui met 'n X.*

<b>EXAMPLE / VOORBEELD</b>	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
My opinion are respected by the other members of this organisation <i>My opinie word gerespekteer deur ander lede van hierdie organisasie</i>	7	6	<del>5</del>	4	3	2	1

<p style="text-align: center;"><b>PSYCHOLOGICAL SAFETY / SIELKUNDIGE VEILIGHEID</b></p>	<p style="text-align: center;">Strongly agree <i>Stem volkome saam</i></p>	<p style="text-align: center;">Moderately agree <i>Stem gedeeltelik saam</i></p>	<p style="text-align: center;">Slightly agree <i>Stem effens saam</i></p>	<p style="text-align: center;">Neutral <i>Neutraal</i></p>	<p style="text-align: center;">Slightly disagree <i>Verskil effens</i></p>	<p style="text-align: center;">Moderately disagree <i>Verskil gedeeltelik</i></p>	<p style="text-align: center;">Strongly disagree <i>Verskil volkome</i></p>
<p>1. Members of this organisation are able to bring up problems and tough issues <i>Lede van hierdie organisasie mag probleme en moeilike kwessies opper</i></p>	7	6	5	4	3	2	1
<p>2. People in this organisation sometimes reject others for being different * <i>Mense in hierdie organisasie verwerp soms mense wat anders is *</i></p>	7	6	5	4	3	2	1
<p>3. It is safe to take a risk in this organisation <i>Dit is veilig om 'n risiko te neem in hierdie organisasie</i></p>	7	6	5	4	3	2	1
<p>4. It is difficult to ask other members of the organisation for help* <i>Dit is moeilik om ander lede van hierdie organisasie om hulp te vra *</i></p>	7	6	5	4	3	2	1
<p>5. No one in this organisation would deliberately act in a way that undermines my efforts <i>Niemand in hierdie organisasie sal doelbewus op 'n manier optree wat my pogings ondermyn nie</i></p>	7	6	5	4	3	2	1
<p>6. Working with members of this organisation, my unique skills and talents are valued and utilised <i>In my werk met lede van hierdie organisasie word my unieke vaardighede en talente waardeer en gebruik</i></p>	7	6	5	4	3	2	1

**CREATIVE SELF-EFFICACY / KREATIEWE SELFBEKWAAMHEID****INSTRUCTIONS / INSTRUKSIES**

Using the following responses, please indicate the extent to which you agree or disagree that each statement currently describes you:  
*Dui asseblief die mate waartoe jy saamstem of verskil met die wyse waarop elke stelling jou beskryf deur die volgende response te gebruik:*

1 = strongly disagree / 1 = *verskil volkome*

2 = moderately disagree / 2 = *verskil gedeeltelik*

3 = slightly disagree / 3 = *verskil effens*

4 = neutral / 4 = *neutraal*

5 = slightly agree / 5 = *stem effens saam*

6 = moderately agree / 6 = *stem gedeeltelik saam*

7 = strongly agree / 7 = *stem volkome saam*

<b>CREATIVE SELF-EFFICACY / KREATIEWE SELFBEKWAAMHEID</b>	Strongly agree	Moderately agree	Slightly agree	Neutral	Slightly disagree	Moderately disagree	Strongly disagree
	<i>Stem volkome saam</i>	<i>Stem gedeeltelik saam</i>	<i>Stem effens saam</i>	<i>Neutraal</i>	<i>Verskil effens</i>	<i>Verskil gedeeltelik</i>	<i>Verskil volkome</i>
1. I feel that I am good at generating novel ideas <i>Ek voel dat ek goed is daarmee om nuwe idees te genereer</i>	7	6	5	4	3	2	1
2. I have confidence in my ability to solve problems creatively <i>Ek het vertroue in my vermoë om probleme kreatief op te los</i>	7	6	5	4	3	2	1
3. I have a knack for further developing the ideas of others <i>Ek het 'n slag daarmee om andere se idees verder te ontwikkel</i>	7	6	5	4	3	2	1

**EMPOWERING LEADERSHIP / BEMAGTIGINGSLEIERSKAP****INSTRUCTIONS / INSTRUKSIES**

The following questions deal with the degree to which you consider your supervisor as someone who gives you the freedom and ability to make independent decisions.  
*Die volgende vrae handel oor die mate waartoe jy jou toesighouer as iemand ag wat vir jou vryheid en die ruimte skep om onafhanklike besluite te neem.*

For each statement, indicate to which extent you agree or disagree with the statement. React to each statement by crossing the number of the box that best reflects your views. There are seven possible answers to each statement ranging from “I strongly agree” (number 7) to “I strongly disagree” (number 1).

*Dui asseblief by elke stelling aan tot watter mate jy daarmee saamstem of verskil. Reageer op elke stelling deur ‘n kruis deur die getal of die blokkie wat jou siening die beste reflekteer te trek. Daar bestaan sewe moontlike antwoorde vir elke stelling wat grens vanaf “Ek stem volkome saam” (nommer 7) tot “Ek verskil volkome” (nommer 1).*

**FOR EXAMPLE / BY VOORBEELD:**

Please refer to the example question herewith below. If you slightly disagree with the statement that – “I get encouraged to solve different tasks single-handedly” – then you mark number three on the seven-point scale provided herewith below with an X.

*Verwys asseblief na die vraag wat as voorbeeld hieronder dien. Indien jy effens met die stelling – “ek word aangemoedig om verskillende take alleen op te los” – verskil, dan merk jy nommer drie op die sewepuntskaal soos hieronder aangedui met ‘n X.*

<b>EXAMPLE / VOORBEELD</b>	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
I get encouraged to solve different tasks single-handedly <i>Ek word aangemoedig om verskillende take alleen op te los</i>	7	6	5	4	<del>3</del>	2	1

<b>EMPOWERING LEADERSHIP / BEMAGTIGINGSLEIERSKAP</b>	Strongly agree	Moderately agree	Slightly agree	Neutral	Slightly disagree	Moderately disagree	Strongly disagree
	<i>Stem volkome saam</i>	<i>Stem gedeeltelik saam</i>	<i>Stem effens saam</i>	<i>Neutraal</i>	<i>Verskil effens</i>	<i>Verskil gedeeltelik</i>	<i>Verskil volkome</i>
1. My manager or supervisor empowers me to solve customer problems <i>My bestuurder of toesighouer bemagtig my om kliëntekwessies op te los</i>	7	6	5	4	3	2	1
2. My manager or supervisor has confidence in my ability to solve problems creatively <i>My bestuurder of toesighouer het vertroue in my vermoë om probleme kreatief op te los</i>	7	6	5	4	3	2	1
3. I do not have to get my manager's or supervisor's approval before I handle customer problems <i>Ek hoef nie my bestuurder of toesighouer se goedkeuring te kry voor ek kliëntekwessies hanteer nie</i>	7	6	5	4	3	2	1
4. I am allowed to do almost anything to solve customer problems <i>Ek word toegelaat om byna enigiets te doen om kliëntekwessies op te los</i>	7	6	5	4	3	2	1
5. My manager or supervisor lets me decide how I want to solve customer problems <i>My bestuurder of toesighouer laat my toe om te besluit hoe ek kliëntekwessies wil oplos</i>	7	6	5	4	3	2	1

Thank you for your cooperation.

*Dankie vir jou deelname.*

**Please indicate in which language you completed this questionnaire:**

***Dui asseblief aan in watter taal jy die vraelys voltooi het:***

English/  
Engels

Afrikaans

**APPENDIX B: QUESTIONNAIRE BACK-TRANSLATED VERSION****BIOGRAPHICAL INFORMATION / BIOGRAFIESE INLIGTING**

Please provide for statistical purposes only, the following information about yourself. Mark the applicable category with an **X** and indicate the **department** which you work in and as well as your **job title** in the open spaces provided in the bottom right hand corner of this page.

*Verskaf asseblief, slegs vir statistieke doeleindes, die volgende inligting oor jouself. Merk die toepaslike kategorie met 'n X en dui die departement waarin jy werksaam is sowel as jou posbenaming in die onderste regterkantste hoek van hierdie bladsy aan.*

<b>Gender/Geslag:</b>	Male/Manlik	<input type="checkbox"/>	<b>Language/Taal:</b>	Afrikaans	<input type="checkbox"/>
	Female/Vroulik	<input type="checkbox"/>		Xhosa	<input type="checkbox"/>
<b>Age/Ouderdom:</b>	18-30 years/jaar	<input type="checkbox"/>		English/Engels	<input type="checkbox"/>
	31-40 years/jaar	<input type="checkbox"/>		Venda	<input type="checkbox"/>
	41-50 years/jaar	<input type="checkbox"/>		Zulu	<input type="checkbox"/>
	51-60 years/jaar	<input type="checkbox"/>		Ndebele	<input type="checkbox"/>
	61-65 years/jaar	<input type="checkbox"/>		South Sotho/Suid-Sotho	<input type="checkbox"/>
<b>Highest qualification obtained/Hoogste kwalifikasie verwerf:</b>	Grade 8 or less/Graad 8 of minder	<input type="checkbox"/>		North Sotho/Noord-Sotho	<input type="checkbox"/>
	Grade 9 - 11/Graad 9-11	<input type="checkbox"/>		Tsonga	<input type="checkbox"/>
	Grade 12/Graad 12	<input type="checkbox"/>		Tswana	<input type="checkbox"/>
	National certificate/Nasionale sertifikaat	<input type="checkbox"/>		Swazi	<input type="checkbox"/>
	Diploma/Diploma	<input type="checkbox"/>		Other/Ander	<input type="checkbox"/>
	Bachelors degree/Baccalaureusgraad	<input type="checkbox"/>	<b>What ethnicity do you consider yourself as/As watter etnisiteit ag jy jouself:</b>	Black (African)/Swart	<input type="checkbox"/>
	Honours degree/Honneursgraad	<input type="checkbox"/>		Coloured/Kleurling	<input type="checkbox"/>
	Masters degree/Meestersgraad	<input type="checkbox"/>		Wit/White	<input type="checkbox"/>
	Doctoral degree/Doktorsgraad	<input type="checkbox"/>		Indian/Indiër	<input type="checkbox"/>
				Asian/Asiër	<input type="checkbox"/>
			<b>Department/Departement:</b>	<hr/>	
			<b>Branch/Tak:</b>	<hr/>	
			<b>Job Title/Posbenaming:</b>	<hr/>	

**GENERAL / ALGEMEEN**

When answering the questions for all the questionnaires please remember the following:

*Hou asseblief die volgende in gedagte wanneer jy die vrae van al die vraelyste beantwoord:*

- There are no right or wrong answers.  
*Daar is geen regte of verkeerde antwoord nie.*
- Select only **one** answer for each question.  
*Kies net **een** antwoord per vraag.*
- Make sure you answer every question, even those which do not seem to directly apply to you.  
*Maak seker jy beantwoord elke vraag, selfs die vrae wat nie direk met jou verband hou nie.*
- Do not spend too much time considering your answer to each question. The information given in a question may not be as full as you would wish, but answer as best you can.  
*Moenie te veel tyd, ten einde jou antwoord op elke vraag te besin, spandeer nie. Die inligting wat elke vraag bevat is nie noodwendig so volledig as wat jy sou verkies nie, maar antwoord so goed jy kan.*
- Be as honest and truthful as you can. Don't give an answer just because it seems to be the right thing to say.  
*Wees so eerlik as moontlik. Moenie 'n antwoord verskaf net omdat dit die regte ding is om te sê nie.*

**FRONTLINE SERVICE INNOVATION / KONTAKDIENS-INNOVASIE****INSTRUCTIONS / INSTRUKSIES**

This is a questionnaire concerning your customer contact and service delivery.

*Hierdie vraelys handel oor die kontak met jou kliënt en dienslewering.*

For each statement, indicate to which extent you agree or disagree with the statement. React to each statement by crossing the number of the box that best reflects your views. There are seven possible answers to each statement ranging from **"I strongly agree" (number 7)** to **"I strongly disagree" (number 1)**.

*Dui asseblief by elke stelling aan tot watter mate jy daarmee saamstem of verskil. Reageer op elke stelling deur 'n kruis deur die getal of die blokkie wat jou siening die beste reflekteer te trek. Daar bestaan sewe moontlike antwoorde vir elke stelling wat grens vanaf **"Ek stem volkome saam" (nommer 7)** tot **"Ek verskil volkome" (nommer 1)**.*

**FOR EXAMPLE / BY VOORBEELD:**

Please refer to the example question herewith below. If you moderately disagree with the statement that – "you try to make sure that you have a clear understanding of your customer's need before you seek a solution for his/her problem" - then you mark number 2 on the seven-point scale provided herewith below with an **X**.

*Verwys asseblief na die vraag wat as voorbeeld hieronder dien. Indien jy gedeeltelik verskil met die stelling – "dat jy eers seker maak dat jy die kliënt se behoefte verstaan alvorens jy 'n oplossing vir sy/haar probleem soek" - dan merk jy nommer twee op die sewepuntskaal soos hieronder aangedui met 'n **X**.*



<b>EXAMPLE / VOORBEELD</b>	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
Before I seek a solution to my customer's problem, I first make sure that I have a clear understanding of his/her need <i>Alvorens ek 'n oplossing vir my kliënt se probleem soek, maak ek seker dat ek eers sy/haar behoefte goed verstaan</i>	7	6	5	4	3	<del>2</del>	1

<b>IDENTIFYING CUSTOMER'S NEEDS / IDENTIFISEER KLIËNTE SE BEHOEFTE</b>	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
1. <i>Tydens 'n dienservaring probeer ek gewoonlik om "myself in die kliënt se skoene te plaas"</i> During a service experience I usually try to place "myself in the customer's shoes"	7	6	5	4	3	2	1
2. <i>Ek probeer die kliënt se standpunt insien wanneer ek 'n dienservaring lewer</i> I try to understand the opinion of the customer when I render a service experience	7	6	5	4	3	2	1
3. <i>Ek snap vinnig die kliënt se behoeftes wat uitgedruk is</i> I readily grasp the expressed needs of the customer	7	6	5	4	3	2	1
4. <i>Ek glo ek het die vermoë om die kliënt se behoeftes uit te klaar</i> I believe I have the ability to determine the customer's needs	7	6	5	4	3	2	1
5. <i>Ek probeer aktief om die kliënt se behoeftes te ontdek tydens my interaksie met hom of haar</i> I actively try to discover the needs of the customer as I interact with him or her	7	6	5	4	3	2	1
6. <i>Ek kan die kliënt se behoeftes aflei, al het sy/hy dit nie ten volle uitgespreek nie</i> I can deduce the needs of the customer although he/she did not expressly state them	7	6	5	4	3	2	1

<b>INNOVATION / INNOVASIE</b>	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
7. <i>Ek kom gereeld met kreatiewe oplossings vir kliënte se probleme vorendag</i> I regularly present creative solutions to customers, problems	7	6	5	4	3	2	1
8. <i>Terwyl ek kliënte bedien, is ek innoverend in maniere om struikelblokke wat kliënte ervaar, te oorkom</i> While serving customers, I innovatively find ways to overcome stumbling blocks which customers experience	7	6	5	4	3	2	1
9. <i>Ek eksperimenteer met nuwe benaderings tot kliënte se probleme</i> I experiment with new approaches to customers' problems	7	6	5	4	3	2	1
10. <i>My baas is van mening dat ek kreatiewe oplossings vir my kliënte se behoeftes vind</i> My boss is of the opinion that I find creative solutions for my customers' needs	7	6	5	4	3	2	1
11. <i>My kliënte is gewoonlik baie tevrede met die oplossings wat ek voorstel</i> My customers are usually very satisfied with the solutions that I propose	7	6	5	4	3	2	1

<b>ADAPTIVE SERVICE OFFERING / AANGEPASTE DIENSAANBIEDING</b>	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
12. <i>Ek pas gewoonlik die soort diens by die unieke behoeftes van elke kliënt aan</i> I usually adapt the type of service to suit the customer's unique needs	7	6	5	4	3	2	1
13. <i>Ek skep 'n dienservaring om in 'n kliënt se behoeftes te voorsien</i> I create a service experience in order to fulfill the customer's needs	7	6	5	4	3	2	1
14. <i>Ek pas my normale manier van doen aan om in die individuele behoeftes van 'n kliënt te voorsien</i> I adapt my normal way of doing things to suit the individual needs of the customer	7	6	5	4	3	2	1
15. <i>Ek is bereid om ons normale benadering totaal te verander om in die behoeftes van 'n kliënt te voorsien</i> I am willing to change our normal approach completely to suit the needs of the customer	7	6	5	4	3	2	1

<b>ADAPTIVE SERVICE OFFERING (continue) / AANGEPASTE DIENSAANBIEDING (vervolg)</b>	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
16. <i>Ek glo dat elke kliënt 'n unieke benadering verg</i> I believe that each customer requires a unique approach	7	6	5	4	3	2	1
17. <i>Ek skets altyd vir die kliënt 'n realistiese prentjie van wat my firma kan doen</i> I always portray a realistic picture to the customer regarding that which my firm can do	7	6	5	4	3	2	1
18. <i>Ek wag tot ek die kliënt se behoeftes heeltemal verstaan voordat ek my aanbieding doen</i> I wait until I completely understand the needs of the customer before I do my presentation	7	6	5	4	3	2	1
19. <i>Ek is altyd reguit in my besprekings met kliënte</i> I'm always to the point during discussions with customers	7	6	5	4	3	2	1
20. <i>Ek probeer vasstel hoe ek die kliënt ten beste kan help om sy/haar probleem op te los</i> I try to ascertain how I can optimally help the customer to resolve his/her problem	7	6	5	4	3	2	1

**PSYCHOLOGICAL OWNERSHIP / SIELKUNDIGE EIENAARSKAP****INSTRUCTIONS / INSTRUKSIES**

Think about the home, boat or vacation home that you own or co-own with someone, and the experiences and feelings associated with the statement 'THIS IS MY (OUR) HOUSE!' The following questions deal with the 'sense of ownership' that you feel for the job that you perform.

*Dink na oor die huis, boot of vakansiehuis wat jy alleen of saam met iemand besit en die ervarings en gevoelens wat met die stelling 'DIT IS MY (ONS) HUIS!' geassosieer word. Die volgende vrae handel oor die 'sin van eienaarskap' wat jy teenoor die pos wat jy tans beklee ervaar.*

For each statement, indicate to which extent you agree or disagree with the statement. React to each statement by crossing the number of the box that best reflects your views. There are seven possible answers to each statement ranging from "I strongly agree" (number 7) to "I strongly disagree" (number 1).

*Dui asseblief by elke stelling aan tot watter mate jy daarmee saamstem of verskil. Reageer op elke stelling deur 'n kruis deur die getal of die blokkie wat jou siening die beste reflekteer te trek. Daar bestaan sewe moontlike antwoorde vir elke stelling wat grens vanaf "Ek stem volkome saam" (nommer 7) tot "Ek verskil volkome" (nommer 1).*

**FOR EXAMPLE / BY VOORBEELD:**

Please refer to the example question herewith below. If you strongly agree with the statement that – I feel that this job belongs to me – then you mark number 7 on the seven-point scale provided herewith below with an **X**.

*Verwys asseblief na die vraag wat as voorbeeld hieronder dien. Indien jy volkome saamstem met die stelling – Ek voel dat hierdie pos aan my behoort – dan merk jy nommer sewe op die sewepuntskaal soos hieronder aangedui met 'n **X**.*

EXAMPLE / VOORBEELD	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
I feel that this job belongs to me <i>Ek voel dat hierdie werk aan my behoort</i>	<del>7</del>	6	5	4	3	2	1

<b>PSYCHOLOGICAL OWNERSHIP / SIELKUNDIGE EIENAARSKAP</b>	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
1. <i>Ek voel dat hierdie werk MYNE is</i> I feel that this job is MINE	7	6	5	4	3	2	1
2. <i>Ek ervaar 'n hoë mate van persoonlike eienaarskap vir hierdie werk</i> I experience a high degree of personal ownership towards this job	7	6	5	4	3	2	1
3. <i>Ek voel dat dit MY werk is hierdie</i> I feel that this is MY job	7	6	5	4	3	2	1
4. <i>Ek voel dat die werk/take wat ek verrig as deel van hierdie werk MYNE is</i> I feel as though the work/tasks that I perform as part of this job are MINE	7	6	5	4	3	2	1
5. <i>Ek voel 'n hoë mate van persoonlike eienaarskap vir die werk/take wat ek verrig</i> I experience a high degree of personal ownership for the work/task that I perform	7	6	5	4	3	2	1
6. <i>Die werk wat ek by hierdie organisasie verrig, is MYNE</i> The job that I perform at this organisation is MINE	7	6	5	4	3	2	1

**EMOTIONAL INTELLIGENCE / EMOSIONELE INTELLIGENSIE****INSTRUCTIONS / INSTRUKSIES**

Indicate the extent to which each statement applies to you using the following scale:

*Dui aan tot watter mate elk van die stellings van jou op toepassing is deur die gebruik van die volgende skaal:*

1 = strongly disagree / 1 = *verskil volkome*

2 = disagree / 2 = *verskil*

3 = neutral / 3 = *neutraal*

4 = agree / 4 = *stem saam*

5 = strongly agree / 5 = *stem volkome saam*

<b>SCHUTTE EMOTIONAL INTELLIGENCE SURVEY / SCHUTTE EMOSIONELE INTELLIGENSIE VRAELYS</b>	Strongly agree  <i>Stem volkome saam</i>	Agree  <i>Stem saam</i>	Neutral  <i>Neutraal</i>	Disagree  <i>Verskil</i>	Strongly disagree  <i>Verskil volkome</i>
1. <i>Ek weet wanneer om my persoonlike probleme met ander te bespreek</i> I know when to discuss my personal problems with others	5	4	3	2	1
2. <i>Wanneer ek struikelblokke teëkom, dink ek aan tye toe ek soortgelyke struikelblokke teëgekome en oorkom het</i> When I experience stumbling blocks I remind myself of similar stumbling blocks I encountered and overcame	5	4	3	2	1
3. <i>Ek verwag om goed te vaar in die meeste dinge wat ek aanpak</i> I expect to do well with most things that I undertake	5	4	3	2	1
4. <i>Ander mense vind dit maklik om vertroulike dinge met my te deel</i> Other people find it easy to share confidential things with me	5	4	3	2	1
5. <i>Ek vind dit moeilik om ander mense se nie-verbale boodskappe te verstaan*</i> I find it difficult to understand other peoples' non-verbal messages*	5	4	3	2	1
6. <i>Sommige van die groot gebeure in my lewe het daartoe gelei dat ek herbesin oor wat belangrik is en wat nie</i> Some major experiences in my life caused me to reconsider what is important and what not	5	4	3	2	1

<b>SCHUTTE EMOTIONAL INTELLIGENCE SURVEY (continue) / SCHUTTE EMOSIONELE INTELLIGENSIE VRAELYS (vervolg)</b>	Strongly agree <i>Stem volkome saam</i>	Agree <i>Stem saam</i>	Neutral <i>Neutraal</i>	Disagree <i>Verskil</i>	Strongly disagree <i>Verskil volkome</i>
7. <i>Wanneer my bui verander, sien ek nuwe moontlikhede raak</i> When my mood changes I see new possibilities	5	4	3	2	1
8. <i>Emosies is een van die dinge wat my lewe die moeite werd maak</i> Emotions is one of the things that makes my life worthwhile	5	4	3	2	1
9. <i>Ek is bewus van die emosies wat ek beleef</i> I am aware of the emotions that I experience	5	4	3	2	1
10. <i>Ek verwag dat goeie dinge sal gebeur</i> I expect good things to happen	5	4	3	2	1
11. <i>Ek deel graag my emosies met ander</i> I like to share my emotions with others	5	4	3	2	1
12. <i>Wanneer ek 'n positiewe emosie ervaar, weet ek hoe om dit te laat voortduur</i> When I experience a positive emotion I know how to let it continue	5	4	3	2	1
13. <i>Ek reël geleenthede wat ander mense geniet</i> I arrange events that other people enjoy	5	4	3	2	1
14. <i>Ek neem deel aan aktiwiteite wat my gelukkig maak</i> I participate in activities that make me happy	5	4	3	2	1
15. <i>Ek is bewus van die nie-verbale boodskappe wat ek aan ander stuur</i> I am aware of the non-verbal messages that I convey to others	5	4	3	2	1
16. <i>Ek tree so op dat ek'n goeie indruk op ander maak</i> I act in such a way that I make a good impression on others	5	4	3	2	1
17. <i>Wanneer ek in 'n positiewe bui is, vind ek dit maklik om probleme op te los</i> When I am in a good mood I find it easy to solve problems	5	4	3	2	1
18. <i>Deur na hul gesigsuitdrukings te kyk, kan ek uitken watter emosies mense ervaar</i> By looking at their facial expressions I can discern what emotions that people experience	5	4	3	2	1
19. <i>Ek weet waarom my emosies verander</i> I know why my emotions change	5	4	3	2	1

<b>SCHUTTE EMOTIONAL INTELLIGENCE SURVEY (continue) / SCHUTTE EMOSIONELE INTELLIGENSIE VRAELYS (vervolg)</b>	Strongly agree <i>Stem volkome saam</i>	Agree <i>Stem saam</i>	Neutral <i>Neutraal</i>	Disagree <i>Verskil</i>	Strongly disagree <i>Verskil volkome</i>
20. <i>Wanneer ek in 'n positiewe bui is, is ek in staat om met nuwe idees vorendag te kom</i> When I am in a good mood I manage to come up with new ideas	5	4	3	2	1
21. <i>Ek het beheer oor my emosies</i> I have control over my emotions	5	4	3	2	1
22. <i>Ek herken maklik die emosies wat ek beleef</i> I easily identify the emotions that I experience	5	4	3	2	1
23. <i>Ek motiveer myself deur 'n goeie uitkoms vir die take wat ek aanpak te verbeel</i> I motivate myself by imaging a positive outcome for the tasks that I perform	5	4	3	2	1
24. <i>Ek komplimenteer ander wanneer hulle iets goed gedoen het</i> I compliment others when they have done something well	5	4	3	2	1
25. <i>Ek is bewus van die nie-verbale boodskappe wat ander mense stuur</i> I am aware of the non-verbal messages that others send	5	4	3	2	1
26. <i>Wanneer 'n ander persoon my van 'n belangrike gebeurtenis in sy of haar lewe vertel, voel ek amper asof ek hierdie gebeurtenis self beleef het</i> When somebody shares an important event that he or she had, I experience it as something that has happened to me.	5	4	3	2	1
27. <i>Wanneer ek 'n verandering in emosies ervaar, is ek geneig om met nuwe idees vorendag te kom</i> When I experience a change of emotion, I tend to come up with new ideas	5	4	3	2	1
28. <i>Wanneer ek 'n uitdaging teëkom, gooi ek tou op omdat ek glo ek gaan misluk*</i> When I face a challenge, I quit because I believe I'll fail*	5	4	3	2	1
29. <i>Ek weet hoe ander mense voel deur bloot na hulle te kyk</i> I know how other people feel by simply looking at them	5	4	3	2	1
30. <i>Ek beur ander mense op wanneer hulle neerslagtig voel</i> I cheer other people up when they feel down	5	4	3	2	1
31. <i>Ek gebruik goeie buie om myself te help aanhou probeer wanneer daar struikelblokke is</i> I utilise good moods to persevere when there are stumbling blocks	5	4	3	2	1



<b>SCHUTTE EMOTIONAL INTELLIGENCE SURVEY (continue) / SCHUTTE EMOSIONELE INTELLIGENSIE VRAELYS (vervolg)</b>	Strongly agree <i>Stem volkome saam</i>	Agree <i>Stem saam</i>	Neutral <i>Neutraal</i>	Disagree <i>Verskil</i>	Strongly disagree <i>Verskil volkome</i>
32. <i>Ek kan aanvoel hoe mense voel deur na hul stemtoon te luister</i> I can sense how people feel by listening to their tone of voice	5	4	3	2	1
33. <i>Dit is moeilik vir my om te verstaan waarom mense voel soos wat hulle voel*</i> I find it difficult to understand why people feel the way they do*	5	4	3	2	1

**EMPOWERING JOB CHARACTERISTICS / BEMAGTIGENDE POSEIENSKAPPE**

**Section 1 / Afdeling 1**

This part of the questionnaire asks you to **describe your job** as *objectively* as you can.  
*Hierdie gedeelte van die vraelys versoek jou om **jou werk** so objektief moontlik te beskryf.*

Please do not use this part of the questionnaire to show how much you like or dislike your job. Questions about that will come later. Instead, try to make your descriptions as accurate and as objective as you possibly can.  
*Moet asseblief nie hierdie gedeelte van die vraelys gebruik om die mate waarin jy van jou werk hou te beskryf nie. Vrae in hierdie verband sal later gevra word. Probeer eerder om jou beskrywings so akuraat en objektief moontlik te hou.*

A sample question reads:  
*Die volgende vraag dien as voorbeeld:*

To what extent does your job require you to work with mechanical equipment? <i>Tot welke mate vereis jou pos dat jy met meganiese toerusting werk?</i>	Very much; the job requires almost constant work with mechanical equipment. <i>Tot 'n groot mate; die pos vereis konstante gebruik van meganiese toerusting.</i>	To a reasonable extent. <i>Tot 'n redelike mate.</i>	Slightly more than moderately. <i>Effens meer as gematigd.</i>	Moderately. <i>Gematig.</i>	Slightly less than moderately. <i>Effens minder as gematigd.</i>	To a limited extent. <i>Tot 'n beperkte mate.</i>	Very little; the job requires almost no contact with mechanical equipment. <i>Baie min; die pos vereis byna geen kontak met meganiese toerusting nie.</i>
	7	<del>6</del>	5	4	3	2	1

If, for example, your job requires you to work with mechanical equipment a good deal of the time – but also requires some paperwork – you might indicate a number 6.  
*Indien jou pos, bevoorbeeld, vereis dat jy tot 'n groot mate meganiese toerusting gebruik – maar ook tot 'n mate papierwerk vereis – sal jy moontlik die getal 6 merk.*

If you do not understand these instructions, please ask for assistance.  
*Indien jy nie hierdie instruksies verstaan nie, vra asseblief om hulp.*

<p>1. <i>Hoeveel outonomie is daar in jou pos? Dit is, tot watter mate laat jou pos jou toe om op jou eie te besluit hoe om die werk te verrig?</i></p> <p>How much autonomy is there in your job? That is, to what extend does your job allow you to decide for yourself how to perform the work?</p>	<p>Very much; the job gives me almost complete responsibility for deciding how and when the work is done.</p> <p><i>Tot 'n groot mate; die pos gee my byna volkome verantwoordelikheid om te besluit hoe en wanneer die werk verrig word</i></p>	<p>To a reasonable extent.</p> <p><i>Tot 'n redelike mate.</i></p>	<p>Slightly more than moderately.</p> <p><i>Effens meer as gematigd.</i></p>	<p>Moderate autonomy; many things are standardised and not under my control, but I can make some decisions about the work.</p> <p><i>Gematigde outonomie; baie goed is gestandaardiseerd en buite my beheer, maar ek kan steeds sekere besluite oor die werk neem</i></p>	<p>Slightly less than moderately.</p> <p><i>Effens minder as gematigd.</i></p>	<p>To a limited extent.</p> <p><i>Tot 'n beperkte mate.</i></p>	<p>Very little; the job gives me almost no personal "say" about how and when the work is done</p> <p><i>Baie min; die pos bied my amper geen persoonlike "sê" oor hoe en wanneer die werk verrig word nie</i></p>
	7	6	5	4	3	2	1

<p>2. <i>Tot watter mate behels jou werk 'n "volledige" en identifiseerbare stuk werk? Dit is, is die pos 'n volledige stuk werk wat 'n duidelike begin en eindpunt insluit? Of is die stuk werk slegs 'n klein gedeelte van 'n geheel wat deur ander mense of deur outomatiese masjinerie voltooi word?</i></p> <p>To what extent does your job comprise of a "complete" and identifiable piece of work? That is, is the job a complete piece of work which includes a clear beginning and end? Or is the portion of the work only a small part of the total which is done by other people or machines?</p>	<p>Very much; I am personally responsible for the whole job</p> <p><i>Tot 'n groot mate; ek is persoonlik verantwoordelik vir al die aspekte van die werk</i></p>	<p>To a reasonable extent.</p> <p><i>Tot 'n redelike mate.</i></p>	<p>Slightly more than moderately.</p> <p><i>Effens meer as gematigd.</i></p>	<p>Moderate responsibility: I am not solely responsible for the job.</p> <p><i>Gematigde outonomie; Ek is nie vir al die aspekte van die werk verantwoordelik nie.</i></p>	<p>Slightly less than moderately.</p> <p><i>Effens minder as gematigd.</i></p>	<p>To a limited extent.</p> <p><i>Tot 'n beperkte mate.</i></p>	<p>Very little; there are only a few aspects of the job that I am responsible for.</p> <p><i>Baie min; ek is slegs vir enkele aspekte van die werk verantwoordelik.</i></p>
	7	6	5	4	3	2	1

<p>3. <i>Hoeveel verskeidenheid is daar in jou pos? Dit is, tot watter mate vereis jou pos jou om 'n verskeidenheid van dinge by die werk te verrig, deur die aanwending van 'n verskeidenheid van jou vaardighede en talente?</i></p> <p>How much variety is there in your job? That is, to what extent does your job allow you to perform a variety of tasks by applying a variety of your skills and talents?</p>	<p>Very much; the job requires me to do many different things, using a number of different skills and talents.</p> <p><i>Tot 'n groot mate; die pos vereis my om baie verskillende dinge, deur die aanwending van verskeie vaardighede en talente, te verrig.</i></p>	<p>To a reasonable extent.</p> <p><i>Tot 'n redelike mate.</i></p>	<p>Slightly more than moderately.</p> <p><i>Effens meer as gematigd.</i></p>	<p>Moderate variety.</p> <p><i>Gematigde verskeidenheid.</i></p>	<p>Slightly less than moderately.</p> <p><i>Effens minder as gematigd.</i></p>	<p>To a limited extent.</p> <p><i>Tot 'n beperkte mate.</i></p>	<p>Very little; the job requires me to do the same routine things over and over again.</p> <p><i>Baie min; die pos vereis dat dieselfde herhalende take oor en oor verrig word.</i></p>
	7	6	5	4	3	2	1

<p>4. <i>Oor die algemeen, hoe beduidend of belangrik is jou werk? Dit is, sal jou werksresultate waarskynlik 'n beduidende effek op die lewe en welstand van ander mense hê?</i></p> <p>In general, how significant or important is your job? That is, will the results of your work have a significant effect on the lives well-being of others?</p>	<p>Highly significant; the outcomes of my work can affect other people in very important ways.</p> <p><i>Baie beduidend; die uitkomst van my werk kan ander mense op 'n belangrike wyse affekteer.</i></p>	<p>Reasonably significant.</p> <p><i>Redelik beduidend.</i></p>	<p>Slightly more than moderately significant.</p> <p><i>Effens meer as gematigd beduidend.</i></p>	<p>Moderately significant.</p> <p><i>Gematig beduidend.</i></p>	<p>Slightly less than moderately significant.</p> <p><i>Effens minder as gematigd beduidend.</i></p>	<p>Limited significance.</p> <p><i>Beperkte beduidendheid.</i></p>	<p>Not very significant; the outcomes of my work are not likely to have important effects on other people.</p> <p><i>Nie baie beduidend nie; die waarskynlikheid dat die uitkomst van my werk 'n belangrike effek op ander mense sal hê is baie klein!</i></p>
	7	6	5	4	3	2	1

<p>5. <i>Tot watter mate verskaf die verrigting van die pos self jou met inligting oor jou werksprestasie? Dit is, verskaf die werk self jou met enige leidrade oor hoe goed jy vaar – ongeag die “terugvoering” wat jy vanaf mede-kollegas en toesighouers ontvang?</i></p> <p>To what extent does the performance of the job provide you with information on your work performance? That is, does the job provide you with any clues regarding your work performance – despite the “feedback” you receive from fellow colleagues and supervisors?</p>	<p>Very much; the job is set up so that I get almost constant “feedback” as I work about how well I am doing.</p> <p><i>Tot ‘n groot mate; die pos is so opgestel dat ek byna konstante “terugvoering” ontvang ten einde te bepaal hoe goed ek vorder.</i></p>	<p>To a reasonable extent.</p> <p><i>Tot ‘n redelike mate.</i></p>	<p>Slightly more than moderately.</p> <p><i>Effens meer as gematigd.</i></p>	<p>Moderately; sometimes the job provides “feedback” to me; sometimes it does not.</p> <p><i>Gematig, soms verskaf die verrigting van die pos my met “terugvoering” en soms verskaf dit nie.</i></p>	<p>Slightly less than moderately.</p> <p><i>Effens minder as gematigd.</i></p>	<p>To a limited extent.</p> <p><i>Tot ‘n beperkte mate.</i></p>	<p>Very little; the job itself is set up so that I could work forever without finding out how well I am doing.</p> <p><i>Baie min, die pos self is so opgestel dat ek tot in ewigheid kan werk sonder om uit te vind hoe ek vaar.</i></p>
	7	6	5	4	3	2	1

## Section 2 / Afdeling 2

Listed below are a number of statements which could be used to describe a job.  
*Hieronder word ‘n aantal stellings, wat gebruik kan word om ‘n werk te beskryf, verskaf.*

Please indicate whether each statement is an accurate or an inaccurate description of your job.  
*Dui asseblief aan of elk van hierdie stellings ‘n akkurate of verkeerde beskrywing van jou pos is.*

Once again, please try to be as objective as you can in deciding how accurately each statement describes your job – regardless of whether you like or dislike your job.  
*Weereens, probeer asseblief om so objektief moontlik te wees wanneer jy beoordeel tot watter mate elke stelling jou pos akkuraat beskryf.*

How accurate is the statement in describing your job? <i>Hoe akkuraat beskryf die volgende stellings jou pos?</i>	Very accurate <i>Baie akkuraat</i>	Mostly accurate <i>Meestal akkuraat</i>	Slightly accurate <i>Effens akkuraat</i>	Uncertain <i>Onseker</i>	Slightly inaccurate <i>Effens onakkuraat</i>	Mostly inaccurate <i>Meestal onakkuraat</i>	Very inaccurate <i>Baie onakkuraat</i>
1. <i>Die pos vereis van my om 'n aantal komplekse of hoër orde vaardighede toe te pas.</i> The job requires me to apply a number of complex and higher order skills.	7	6	5	4	3	2	1
2. <i>Hierdie pos is so saamgestel dat ek 'n volledige stuk werk van begin tot einde kan verrig.</i> This job is structured in such a way that I can perform a complete piece of work from beginning to end.	7	6	5	4	3	2	1
3. <i>Deur bloot die werk wat deur die pos vereis word te verrig, bied baie geleentheid vir my om vas te stel hoe goed ek vaar.</i> By simply performing the work that is required by the job, provides me with ample opportunity to determine how well I'm performing.	7	6	5	4	3	2	1
4. <i>Die pos laat my toe om 'n aantal komplekse en hoër orde vaardighede toe te pas.</i> The job allows me to apply a number of complex and higher order skills.	7	6	5	4	3	2	1
5. <i>Hierdie werk is van so 'n aard dat baie ander mense, deur die mate waartoe die werk goed verrig word, beïnvloed word.</i> This job is of such a nature that many other people are influenced by the extent to which the job is performed well.	7	6	5	4	3	2	1
6. <i>Die pos bied vir my die geleentheid om my persoonlike inisiatief en oordeel tydens werksverrigting te gebruik.</i> Whilst performing my job it offers me the opportunity to use my own personal initiative and judgement.	7	6	5	4	3	2	1
7. <i>Hierdie pos bied my die geleentheid om die stukke werk waarmee ek begin ook heeltemal te voltooi.</i> This job offers me the opportunity to complete the pieces of work that I've started.	7	6	5	4	3	2	1
8. <i>Nadat ek werk afhandel het, weet ek of ek goed presteer het.</i> Once I've finished the work I know whether I've performed well.	7	6	5	4	3	2	1
9. <i>Hierdie pos bied genoegsame geleentheid vir onafhanklikheid en vryheid oor die wyse waarop die werk verrig word.</i> This job offers ample opportunity for independence and freedom regarding the way in which the job is performed.	7	6	5	4	3	2	1
10. <i>Hierdie pos is binne die groter prentjie baie beduidend en belangrik.</i> Within the bigger picture this job is very significant and important.	7	6	5	4	3	2	1

**Section 3 / Afdeling 3**

Now please indicate how you personally feel about your job.  
*Dui asseblief aan hoe jy persoonlik oor jou pos voel.*

Each of the statements below is something that a person might say about his or her job. Please indicate your own personal feelings about your job by indicating to what extent you agree with each of the statements.

*Elk van die stellings hieronder beskryf iets wat 'n persoon dalk oor sy of haar pos mag sê. Dui asseblief jou eie persoonlike gevoelens oor jou pos aan deur aan te dui tot watter mate jy met elk van die stellings saamstem.*

How much do you agree with the statement? <i>Tot watter mate stem jy met die stelling saam?</i>	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
1. <i>My opinie van myself neem toe wanneer ek die werk goed verrig.</i> My opinion of myself increases when I perform this job well.	7	6	5	4	3	2	1
2. <i>Oor die algemeen is ek baie tevrede met hierdie werk.</i> In general I am very satisfied with this job.	7	6	5	4	3	2	1
3. <i>Ek ervaar 'n groot sin van persoonlike bevrediging wanneer ek hierdie werk goed verrig.</i> I experience a great sense of personal satisfaction when I perform this job well.	7	6	5	4	3	2	1
4. <i>Ek dink selde daaraan om uit hierdie pos te bedank.</i> I seldomly think about resigning from this job.	7	6	5	4	3	2	1
5. <i>Ek voel goed en gelukkig wanneer ek ontdek dat ek goed in my werk presteer het.</i> I feel good and happy when I discovered that I have performed well in my job.	7	6	5	4	3	2	1
6. <i>Ek is oor die algemeen tevrede met die tipe werk wat ek in hierdie pos verrig.</i> In general I am satisfied with the type of work that I perform in this job.	7	6	5	4	3	2	1
7. <i>Die mate waartoe ek my werk goed verrig beïnvloed oor die algemeen my eie gevoelens.</i> The degree to which I perform my job well generally influences my own feelings.	7	6	5	4	3	2	1

**Section 4 / Afdeling 4**

Now please indicate how satisfied you are with each aspect of our job listed below.  
*Dui asseblief aan tot watter mate jy tevrede is met elk van die aspekte van jou werk soos hieronder gelys.*

How satisfied are you with this aspect of your job? <i>Tot watter is jy tevrede met hierdie aspek van jou werk?</i>	Extremely satisfied <i>Uiters tevrede</i>	Satisfied <i>Tevrede</i>	Slightly satisfied <i>Effens tevrede</i>	Neutral <i>Neutraal</i>	Slightly dissatisfied <i>Effens ontevrede</i>	Dissatisfied <i>Ontevrede</i>	Extremely dissatisfied <i>Uiters ontevrede</i>
1. <i>Die mate van persoonlike groei en ontwikkeling wat ek vanuit my pos verkry.</i> The degree of personal growth and development I derive from my job.	7	6	5	4	3	2	1
2. <i>Wanneer ek my werk verrig kry ek die gevoel dat ek iets reggekry het wat die moeite werd is.</i> When I perform my job I feel that I've achieved something worthwhile.	7	6	5	4	3	2	1
3. <i>Die mate van onafhanklike denke en aksie wat ek in my werk kan toepas.</i> The degree of independent thought and action which I'm able to apply in my job.	7	6	5	4	3	2	1
4. <i>Die hoeveelheid uitdagings in my werk.</i> The number of challenges in my job.	7	6	5	4	3	2	1

**Section 5 / Afdeling 5**

Now please think of the other people in your organisation who hold the same job that you do. If no one has exactly the same job as you, think of the job which is most similar to yours.  
*Dink asseblief aan ander mense in jou organisasie wat dieselfde pos as jy beklee. Indien niemand presies dieselfde pos as jy beklee nie, dink aan 'n pos wat naasteby met joune ooreenstem.*

Please think about how accurately each of the statements describes the feelings of those people about the job and select a number on the seven-point scale herewith below.  
*Besin asseblief oor hoe akkuraat elk van die stellings die gevoelens van daardie mense wat die pos beklee beskryf en kies 'n getal op die sewepuntskaal hieronder.*

It is quite all right if your answers here are different from when you described your own reactions to the job. Often different people feel quite differently about the same job.  
*Dit is in orde indien jou antwoorde hier verskil van hoe jy jou eie reaksies tot die pos beskryf het. Mense se gevoelens oor dieselfde pos verskil dikwels.*



How much do you agree with the statement? <i>Tot watter mate stem jy met die stelling saam?</i>	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
1. <i>Meeste mense in hierdie pos ervaar 'n sin van persoonlike bevrediging wanneer hulle die werk goed verrig.</i> Most people in this job experience a sense of personal satisfaction when they perform well in this job.	7	6	5	4	3	2	1
2. <i>Meeste mense in hierdie pos is baie tevrede met die pos.</i> Most people in this job are very satisfied with the job.	7	6	5	4	3	2	1
3. <i>Mense in hierdie pos dink selde daaraan om te bedank.</i> People in this job seldom think about resigning.	7	6	5	4	3	2	1
4. <i>Meeste mense in hierdie pos voel goed of gelukkig wanneer hulle uitvind dat hulle die werk goed verrig het.</i> Most people in this job feel good or happy when they discover that they've performed well.	7	6	5	4	3	2	1

**INNOVATIVE ORGANISATIONAL CLIMATE / INNOVERENDE ORGANISASIEKLIMAAT****INSTRUCTIONS / INSTRUKSIES**

Please read the following statements and rate “how often true” each specific statement is of your current work environment. The following scales will be used:

*Lees asseblief die volgende stelings en beoordeel “hoe gereeld waar” elk van die spesifieke stellings van jou huidige werksomgewing is. Die volgende skale moet gebruik word:*

Never or almost never = 1 / *Nooit of byna nooit = 1*

Sometimes = 2 / *Soms = 2*

Often = 3 / *Gereeld = 3*

Always or almost always = 4 / *Altyd of byna altyd = 4*

<b>ABBREVIATED KEYS / VERKORTE KEYS</b>	Never or almost never <i>Nooit of byna nooit</i>	Sometimes <i>Soms</i>	Often <i>Gereeld</i>	Always or almost always <i>Altyd of byna altyd</i>
1. <i>Word nuwe idees in hierdie organisasie aangemoedig?</i> Are new ideas encouraged in this organisation?	1	2	3	4
2. <i>Kry mense erkenning vir kreatiewe probleemoplossing in hierdie organisasie?</i> Do people get recognition for creative problem solving in this organisation?	1	2	3	4
3. <i>Word mense beloon vir kreatiewe probleemoplossing in hierdie organisasie?</i> Are people rewarded for creative problem solving in this organisation?	1	2	3	4
4. <i>Het my baas vir my duidelike algemene doelwitte gestel?</i> Did my boss set clear general goals for me?	1	2	3	4
5. <i>Het my baas goeie interpersoonlike vaardighede?</i> Does my boss have good interpersonal skills?	1	2	3	4
6. <i>Ondersteun my baas my binne die organisasie?</i> Does my boss support me within the organisation?	1	2	3	4

<b>ABBREVIATED KEYS (continue) / VERKORTE KEYS (vervolg)</b>	Never or almost never <i>Nooit of byna nooit</i>	Sometimes <i>Soms</i>	Often <i>Gereeld</i>	Always or almost always <i>Altyd of byna altyd</i>
7. <i>Is daar 'n gevoel van vertroue onder die mense met wie ek die nouste saamwerk?</i> Is there a sense of trust among the people with whom I work most closely?	1	2	3	4
8. <i>Kan ek maklik die materiale wat ek nodig het in die hande kry om my werk te doen?</i> Am I able to easily obtain the material which I need to perform my job?	1	2	3	4
9. <i>Is die take wat my werk behels uitdagend?</i> Are the tasks which my job include challenging?	1	2	3	4
10. <i>Het ek die vryheid om te besluit hoe ek probleme gaan oplos?</i> Do I have the freedom to decide how I am to solve problems?	1	2	3	4
11. <i>Is daar politieke probleme in hierdie organisasie? *</i> Are there political problems within this organisation? *	1	2	3	4
12. <i>Is mense krities teenoor nuwe idees in hierdie organisasie? *</i> Are people critical of new ideas in this organisation? *	1	2	3	4
13. <i>Beleef ek 'n gevoel van tydsdruk in my werk? *</i> Do I experience a sense of time pressure in my job? *	1	2	3	4
14. <i>Is daar realistiese verwagtinge van wat mense kan vermag in hierdie organisasie?</i> Are there realistic expectations of what people can achieve in this organisation?	1	2	3	4
15. <i>My organisasie is kreatief</i> My organisation is creative	1	2	3	4
16. <i>Ek glo ek is tans kreatief in my werk</i> I believe I am currently creative in my job	1	2	3	4
17. <i>My kontakwerker-kollegas is produktief</i> My frontline colleagues are productive	1	2	3	4
18. <i>Die organisasie is in die algemeen produktief</i> The organisation is generally productive	1	2	3	4

**PSYCHOLOGICAL SAFETY / SIELKUNDIGE VEILIGHEID****INSTRUCTIONS / INSTRUKSIES**

The following questions deal with the 'sense of safety' that you feel within the organisation.

*Die volgende vrae handel oor die 'sin van veiligheid' wat jy binne die organisasie waar jy werk ervaar.*

For each statement, indicate to which extent you agree or disagree with the statement. React to each statement by crossing the number of the box that best reflects your views. There are seven possible answers to each statement ranging from "I strongly agree" (number 7) to "I strongly disagree" (number 1).

*Dui asseblief by elke stelling aan tot watter mate jy daarmee saamstem of verskil. Reageer op elke stelling deur 'n kruis deur die getal of die blokkie wat jou siening die beste reflekteer te trek. Daar bestaan sewe moontlike antwoorde vir elke stelling wat grens vanaf "Ek stem volkome saam" (nommer 7) tot "Ek verskil volkome" (nommer 1).*

**FOR EXAMPLE / BY VOORBEELD:**

Please refer to the example question herewith below. If you slightly agree with the statement that – "my opinion is respected by other members of this organisation" –then you mark number five on the seven-point scale provided herewith below with an X.

*Verwys asseblief na die vraag wat as voorbeeld hieronder dien. Indien jy effens met die stelling – "my opinie word deur ander lede van hierdie organisasie gerespekteer" – saam stem, dan merk jy nommer vyf op die sewepuntskaal soos hieronder aangedui met 'n X.*

<b>EXAMPLE / VOORBEELD</b>	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
My opinion are respected by the other members of this organisation. <i>My opinie word gerespekteer deur ander lede van hierdie organisasie.</i>	7	6	<del>5</del>	4	3	2	1

<p style="text-align: center;"><b>PSYCHOLOGICAL SAFETY / SIELKUNDIGE VEILIGHEID</b></p>	<p style="text-align: center;">Strongly agree <i>Stem volkome saam</i></p>	<p style="text-align: center;">Moderately agree <i>Stem gedeeltelik saam</i></p>	<p style="text-align: center;">Slightly agree <i>Stem effens saam</i></p>	<p style="text-align: center;">Neutral <i>Neutraal</i></p>	<p style="text-align: center;">Slightly disagree <i>Verskil effens</i></p>	<p style="text-align: center;">Moderately disagree <i>Verskil gedeeltelik</i></p>	<p style="text-align: center;">Strongly disagree <i>Verskil volkome</i></p>
<p>1. <i>Lede van hierdie organisasie mag probleme en moeilike kwessies opper.</i> Members of this organisation may raise problems and difficult issues.</p>	7	6	5	4	3	2	1
<p>2. <i>Mense in hierdie organisasie verwerp soms mense wat anders is.*</i> People in this organisation sometimes reject people who are different.*</p>	7	6	5	4	3	2	1
<p>3. <i>Dit is veilig om 'n risiko te neem in hierdie organisasie.</i> It is safe to take a risk in this organisation.</p>	7	6	5	4	3	2	1
<p>4. <i>Dit is moeilik om ander lede van hierdie organisasie om hulp te vra.*</i> It is difficult to ask other members of this organisation for help.*</p>	7	6	5	4	3	2	1
<p>5. <i>Niemand in hierdie organisasie sal doelbewus op 'n manier optree wat my pogings ondermyn nie.</i> Nobody in this organistaion will willfully act in a way to undermine my efforts.</p>	7	6	5	4	3	2	1
<p>6. <i>In my werk met lede van hierdie organisasie word my unieke vaardighede en talente waardeer en gebruik</i> In my work with members of this organisation my unique skills and talents are appreciated and used.</p>	7	6	5	4	3	2	1

**CREATIVE SELF-EFFICACY / KREATIEWE SELFBEKWAAMHEID****INSTRUCTIONS / INSTRUKSIES**

Using the following responses, please indicate the extent to which you agree or disagree that each statement currently describes you:

*Dui asseblief die mate waartoe jy met die mate waartoe elke stelling jou beskryf saamstem of verskil deur gebruik van die volgende response:*

1 = strongly disagree / 1 = *verskil volkome*

2 = moderately disagree / 2 = *verskil gedeeltelik*

3 = slightly disagree / 3 = *verskil effens*

4 = neutral / 4 = *neutraal*

5 = slightly agree / 5 = *stem effens saam*

6 = moderately agree / 6 = *stem gedeeltelik saam*

7 = strongly agree / 7 = *stem volkome saam*

<b>CREATIVE SELF-EFFICACY / KREATIEWE SELFBEKWAAMHEID</b>	Strongly agree	Moderately agree	Slightly agree	Neutral	Slightly disagree	Moderately disagree	Strongly disagree
	<i>Stem volkome saam</i>	<i>Stem gedeeltelik saam</i>	<i>Stem effens saam</i>	<i>Neutraal</i>	<i>Verskil effens</i>	<i>Verskil gedeeltelik</i>	<i>Verskil volkome</i>
1. <i>Ek voel dat ek goed is daarmee om nuwe idees te genereer</i> I feel that I am good at generating new ideas.	7	6	5	4	3	2	1
2. <i>Ek het vertroue in my vermoë om probleme kreatief op te los</i> I have confidence in my ability to solve problems creatively.	7	6	5	4	3	2	1
3. <i>Ek het 'n slag daarmee om andere se idees verder te ontwikkel</i> I am good at developing others' ideas further.	7	6	5	4	3	2	1

**EMPOWERING LEADERSHIP / BEMAGTIGINGSLEIERSKAP****INSTRUCTIONS / INSTRUKSIES**

The following questions deal with the degree to which you consider your supervisor as someone who gives you the freedom and ability to make independent decisions.  
*Die volgende vrae handel oor die mate waartoe jy jou toesighouer as iemand ag wat vir jou vryheid en die ruimte skep om onafhanklike besluite te neem.*

For each statement, indicate to which extent you agree or disagree with the statement. React to each statement by crossing the number of the box that best reflects your views. There are seven possible answers to each statement ranging from “I strongly agree” (number 7) to “I strongly disagree” (number 1).

*Dui asseblief by elke stelling aan tot watter mate jy daarmee saamstem of verskil. Reageer op elke stelling deur 'n kruis deur die getal of die blokkie wat jou siening die beste reflekteer te trek. Daar bestaan sewe moontlike antwoorde vir elke stelling wat grens vanaf “Ek stem volkome saam” (nommer 7) tot “Ek verskil volkome” (nommer 1).*

**FOR EXAMPLE / BY VOORBEELD:**

Please refer to the example question herewith below. If you slightly disagree with the statement that – “I get encouraged to solve different tasks single-handedly” – then you mark number three on the seven-point scale provided herewith below with an X.

*Verwys asseblief na die vraag wat as voorbeeld hieronder dien. Indien jy effens met die stelling – “ek word aangemoedig om verskillende take alleen op te los” – verskil, dan merk jy nommer drie op die sewepuntskaal soos hieronder aangedui met 'n X.*

EXAMPLE / VOORBEELD	Strongly agree <i>Stem volkome saam</i>	Moderately agree <i>Stem gedeeltelik saam</i>	Slightly agree <i>Stem effens saam</i>	Neutral <i>Neutraal</i>	Slightly disagree <i>Verskil effens</i>	Moderately disagree <i>Verskil gedeeltelik</i>	Strongly disagree <i>Verskil volkome</i>
I get encouraged to solve different tasks single-handedly <i>Ek word aangemoedig om verskillende take alleen op te los</i>	7	6	5	4	<del>3</del>	2	1

EMPOWERING LEADERSHIP / BEMAGTIGINGSLEIERSKAP	Strongly agree	Moderately agree	Slightly agree	Neutral	Slightly disagree	Moderately disagree	Strongly disagree
	<i>Stem volkome saam</i>	<i>Stem gedeeltelik saam</i>	<i>Stem effens saam</i>	<i>Neutraal</i>	<i>Verskil effens</i>	<i>Verskil gedeeltelik</i>	<i>Verskil volkome</i>
1. <i>My bestuurder of toesighouer bemagtig my om kliëntekwessies op te los</i> My manager or supervisor empowers me to solve customer issues	7	6	5	4	3	2	1
2. <i>My bestuurder of toesighouer het vertroue in my vermoë om probleme kreatief op te los</i> My manager or supervisor trusts my ability to solve problems creatively	7	6	5	4	3	2	1
3. <i>Ek hoef nie my bestuurder of toesighouer se goedkeuring te kry voor ek kliëntekwessies hanteer nie</i> I need not obtain my manager's or supervisor's approval before I handle customer issues	7	6	5	4	3	2	1
4. <i>Ek word toegelaat om byna enigiets te doen om kliëntekwessies op te los</i> I am allowed to do just about anything to solve customer issues	7	6	5	4	3	2	1
5. <i>My bestuurder of toesighouer laat my toe om te besluit hoe ek kliëntekwessies wil oplos</i> My manager or supervisor lets me decide on how I want to solve customer issues	7	6	5	4	3	2	1

Thank you for your cooperation.

*Dankie vir jou deelname.*

**Please indicate in which language you completed this questionnaire:**

***Dui asseblief aan in watter taal jy dié vraelys voltooi het:***

English/  
Engels

Afrikaans





**APPROVED WITH STIPULATIONS**  
REC Humanities New Application Form

8 January 2018

Project number: IPSY-2017-1649

Project title: The Antecedents of Frontline Service Innovation within Agricultural Cooperatives within the Western Cape

Dear Ms Marietjie Nieder-Heitmann

Your REC Humanities New Application Form submitted on **19 November 2017** was reviewed by the REC: Humanities and approved with stipulations.

**Ethics approval period:**

Protocol approval date (Humanities)	Protocol expiration date (Humanities)
08 January 2018	07 January 2021

**REC STIPULATIONS:**

**The researcher may proceed with the envisaged research provided that the following stipulations, relevant to the approval of the project are adhered to or addressed:**

The researcher is requested to upload the necessary Permission Letters once received before data collection commences. **[Response Required]**

**HOW TO RESPOND:**

Some of these stipulations may require your response. Where a response is required, you must respond to the REC within **six (6) months** of the date of this letter. Your approval would expire automatically should your response not be received by the REC within 6 months of the date of this letter.

**Your response (and all changes requested) must be done directly on the electronic application form on the Infonetica system:** <https://applyethics.sun.ac.za/Project/Index/1807>

Where revision to supporting documents is required, please ensure that you replace all outdated documents on your application form with the revised versions. Please respond to the stipulations in a separate cover letter titled “**Response to REC stipulations**” and attach the cover letter in the section **Additional Information and Documents**.

Please take note of the General Investigator Responsibilities attached to this letter. You may commence with your research after complying fully with these guidelines.

**If the researcher deviates in any way from the proposal approved by the REC: Humanities, the researcher must notify the REC of these changes.**

Please use your SU project number (IPSY-2017-1649) on any documents or correspondence with the REC concerning your project.

Please note that the REC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

**FOR CONTINUATION OF PROJECTS AFTER REC APPROVAL PERIOD**

Please note that a progress report should be submitted to the Research Ethics Committee: Humanities before the approval period has expired if a continuation of ethics approval is required. The Committee will then consider the continuation of the project for a further year (if necessary)

**Included Documents:**

Document Type	File Name	Date	Version
Request for permission	Cover Letter Overberg Agri 13-08-17	10/10/2017	1
Request for permission	Cover Letter SSK 13-08-17	10/10/2017	1
Request for permission	Institutional Permission Form 01-11-17	01/11/2017	2
Request for permission	Institusionele Toestemmingsvorm 01-11-17	01/11/2017	2
Data collection tool	Measures Bilingual Version 11-11-17	11/11/2017	1
Proof of permission	Correspondence from Prof Pamela Tiemey	11/11/2017	1
Research Protocol/Proposal	CHAPTERS 1-3 11-11-17	11/11/2017	1
Informed Consent Form	Consent Form - Participant 11-11-17	11/11/2017	2
Informed Consent Form	Toestemmingsvorm - Deelnemer 11-11-17	11/11/2017	2
Informed Consent Form	Consent Form - Manager or Supervisor 11-11-17	11/11/2017	2
Informed Consent Form	Toestemmingsvorm - Bestuurder of Toesighouer 11-11-17	11/11/2017	2
Request for permission	Cover Letter Kaap Agri 09-11-17	11/11/2017	1

If you have any questions or need further help, please contact the REC office at [cgraham@sun.ac.za](mailto:cgraham@sun.ac.za).

Sincerely,

Clarissa Graham

REC Coordinator: Research Ethics Committee: Human Research (Humanities)

*National Health Research Ethics Committee (NHREC) registration number: REC-050411-032.  
The Research Ethics Committee: Humanities complies with the SA National Health Act No.61 2003 as it pertains to health research. In addition, this committee abides by the ethical norms and principles for research established by the Declaration of Helsinki (2013) and the Department of Health Guidelines for Ethical Research: Principles Structures and Processes (2<sup>nd</sup> Ed.) 2015. Annually a number of projects may be selected randomly for an external audit.*