Organisational internal factors and the innovativeness in SMEs in Gauteng, South Africa

A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Management in Entrepreneurship and New Venture Creation

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ABSTRACT

This research study investigated the relationship between organisational internal factors and the SMEs' innovativeness. The theoretical background to the study was adopted and grounded on the theory of corporate entrepreneurship. The study focused on SMEs' owners and managers with firms operating in Gauteng, South Africa.

The organisational internal factors that were investigated are management support, work discretion, rewards and reinforcement, time availability, and organisational boundaries. The study took a quantitative approach, implementing existing instruments and analysed a sample of 272 owner-managers.

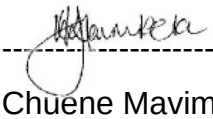
Multiple linear regression analysis was used as a core statistical technique to analyse the primary data and found a significant and positive relationship between management support to innovative ideas and the SMEs' innovativeness. The results presented a significant and positive relationship between management support to execute innovative ideas and the SMEs' innovativeness. The study highlighted a significant and positive relationship between time availability to handle the workload and the SMEs' innovativeness. The study further highlighted a significant and positive relationship between time availability constraints on the job and the SMEs' innovativeness. The study also found a positive but not significant relationship between the organisational antecedent of rewards/reinforcement and SMEs' innovativeness.

The study contributes to the research theory of corporate entrepreneurship by recognising the importance and influence of the organisational internal factors in the context of advancing the SMEs' innovativeness in Gauteng. The study provides government, academic practitioners, and the SMEs owners with insights of organisational internal factors' policies that can be implemented to facilitate and encourage employees' innovativeness. The study is relevant to the SMEs' owners who seek to remain entrepreneurial, competitive and contribute to economic growth.

Keywords: Corporate entrepreneurship; organisational antecedents; innovativeness; Gauteng; South Africa.

DECLARATION

I, Chuene Mavimbela, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in the Field of Entrepreneurship at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.



Chuene Mavimbela

Signed at Kempton Park, Johannesburg

On the 04 day of October 2021.

DEDICATION

I dedicate this research paper to my mom (Makwena Audrey Moeti), and my late father (Nicholas Botele Moeti), who have always supported and loved me unconditionally, despite the circumstances.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1: INTRODUCTION

1.1 Introduction

Globally, and in South Africa, the current economy is facing an uncertain business environment which requires firms to rise above these challenges by looking for solutions that enhance innovation and achieve sustainability (Drucker, 2013; Kuratko, Hornsby & Hayton, 2015; Kuratko & Morris, 2018; Morris, Kuratko & Covin, 2010). Small-medium enterprises (SMEs) facing these crises tend to struggle during these periods due to limited financial resources and high loan interest rates from banks (Bourletidis & Triantafyllopoulos, 2014; Van Scheers, 2018). The impact of the Coronavirus (COVID-19) crisis has further demonstrated that small businesses do not only rely on government policies to survive challenges, but the firm's internal innovative capability is also significant (Kuckertz et al., 2020; Li-Ying & Nell, 2020; van Eck, 2020). Firms that suffer these challenges can perceive such crises as threats and opportunities; however, the way they manage encourages employees to support the firm's assessment of the situation (Fisher, Stevenson, Neubert, Burnell & Kuratko, 2020; Penrose, 2000).

Through the years, research has demonstrated that organisations that initiate corporate entrepreneurship as an organisational strategy tend to have increased profit and growth achieved through continuous innovation (Mcgrath, Venkataraman & Macmillan, 1994; Urban, 2016). Corporate entrepreneurship within the organisations tends to facilitate positive individual interaction to perform the desired entrepreneurial behaviour (Phan, Wright, Ucbasaran & Tan, 2009).

An important focus area of this study is understanding how corporate entrepreneurship is endorsed in the organisational setting of small businesses (Hornsby, Kuratko, Holt & Wales, 2013; Kuratko et al., 2014). Even though corporate entrepreneurship and entrepreneurial activities are easily achieved because of the decisions involved (Ireland, Covin & Kuratko, 2009; Kuratko et al., 2015), one still requires employees within the organisation to be aligned. These ensure entrepreneurial actions and a supportive business climate (Ireland et al., 2009; Kuratko et al., 2015). Corporate entrepreneurship practices embedded

within the organisation tend to produce competitiveness and innovativeness (Ferreira, Fernandes, Alves & Raposo, 2015; Kuratko, Covin & Garrett, 2009).

Although organisational internal factors are crucial in promoting corporate entrepreneurship within firms (Urban & Wood, 2017), it is vital to appreciate the technological positioning of the firm. This will facilitate opportunities and innovativeness (Alvarez, Barney & Anderson, 2013; Busenitz, Plummer, Klotz, Shahzad & Rhoads, 2014; Chen & Urban, 2018). Managers and firms that adopt a technology mindset and use new technologies tend to achieve innovative outcomes (Ringberg, Reihlen & Rydén, 2019).

In this chapter, the research topic is conceptualised. The study context is discussed to provide the background to the gap identified. The theoretical knowledge discussed identifies relevant theories that ground the study. The study focused on the research problem, research questions, aims, conceptual definitions, and contribution.

1.2 Theoretical background to the study

The study has its base in the corporate entrepreneurship literature, reconciling this to the SME context, specifically focusing on organisational internal factors and the innovativeness in SMEs in Gauteng, South Africa. The study explores the influence of these organisational internal factors on SMEs' innovativeness. The concept of organisational internal factors has been thoroughly researched in terms of corporate entrepreneurship literature (Hornsby et al., 2013; Hughes & Mustafa, 2017; Kuratko et al., 2014; Urban, 2017; Urban & Verachia, 2019; Urban & Wood, 2017). Corporate entrepreneurship exists in the context of entrepreneurship which is described as the creative combination to execute existing and new goods, processes, markets, supply, or organisations to achieve innovativeness (Schumpeter, 1934). In the area of corporate entrepreneurship, multiple theoretical models have been developed to support the entrepreneurial behaviour of the firm (Hornsby, Kuratko & Zahra, 2002; Ireland et al., 2009). Researchers have justified the use of the integrative model of corporate entrepreneurship strategy to demonstrate the firm's entrepreneurial processes and behaviour through pro-entrepreneurship architecture (Ireland et al., 2009).

The middle manager's perception of the internal environment model has been used to justify the individual behaviour within firms. There is an extensive theory around corporate entrepreneurship which has been studied and has existed for more than 40 years to create innovation and achieve competitive advantage (Bierwerth, Schwens, Isidor & Kabst, 2015; Kuratko et al., 2015; Kuratko & Morris, 2018). Corporate entrepreneurship is developing globally and is embraced by organisations that are not viewed as entrepreneurial in order to survive the increasingly competitive and challenging environments (Kuratko et al., 2015; Murimbika & Urban, 2014; Phan et al., 2009; Urban & Wood, 2015).

Various elements that are important for the creation of a theoretically grounded domain of corporate entrepreneurship can be freely recognised (Kuratko et al., 2015; Phan et al., 2009). However, apart from the recent growing interest in corporate entrepreneurship research, researchers have come up with new and essential research questions. These are to expand the theoretical and empirical knowledge concerning the domains of corporate entrepreneurship and entrepreneurial behaviour (Hornsby, Kuratko, Shepherd & Bott, 2009; Kuratko et al., 2015; Kuratko, Hornsby & Covin, 2014).

Evaluation of the firm and individual behaviour is essential to advance or inhibit corporate entrepreneurship in firms. Drucker (2013) and Phan et al. (2009) argue that the scope of corporate entrepreneurship is widening and goes beyond the traditional models of technology within firms. This outcome has been created by the increasingly competitive and uncertain environment which has pressed firms to develop an entrepreneurial culture. They claim that future research should investigate corporate entrepreneurship in different sectors. This study takes a multi-sectoral approach and investigates the influence of organisational internal factors and the innovativeness across SMEs in various industries.

1.3 Context of the study

South Africa, in the past two decades, has made significant social progress by providing millions of disadvantaged communities with access to essential services, such as health, education, housing, and electricity (OECD, 2017). Despite these accomplishments, the current economic outlook remains uncertain

with a persistent low Gross Domestic Product (GDP) per capita growth, projected at 1% in 2020 and a high unemployment rate sitting at 29.1% (Bosma et al., 2020). The South African Reserve Bank (SARB) expected the economy to experience a contraction of 7.3% in July 2020 and a steady growth increase of 3.7% in 2021 (SARB, 2020). The contemplated negative domestic economic growth outlook has been exacerbated by the spread of the COVID-19 pandemic (SARB, 2020).

The South African government, like other countries around the world facing these economic challenges, has acknowledged SMEs as a vehicle that will provide innovative solutions, and also promote economic growth (Rajagopaul, Magwentshu & Kalidas, 2020; Bosma et al., 2020; Cusmano, Koreen & Pissareva, 2018; Groepe, 2015; OECD, 2019). SMEs contribute about one-third of the national GDP in developing countries (Cusmano et al., 2018). The changing environment has underlined, globally and locally, the importance of SMEs to the economic contribution, with emphasis on policies that encourage acceptance of technology and innovation within SMEs (DST, 2008; Kuratko & Morris, 2003; OECD, 2019). The South African government has established policies that seek to address financing, regulatory barriers, poor infrastructure to provide a conducive environment, strengthening inclusive growth to attract the SMEs (Bosma et al., 2020; Ntshavheni, 2019). These initiatives to attract SMEs in driving economic growth tend to fail when implemented as the only solution without incorporating the internal firm setup that provides managers with context to swift changes (Kuratko et al., 2015).

The uncertain economic environment and increasing competitiveness have resulted in firms seeking a receptive environment, market responsiveness, and competitive ways to maintain relevance (Urban, 2017). The current business environment is driven by the emergence of technology and the firm's rate to adopt technology to maintain innovativeness. These transformations have coerced firms to review traditional management and growth models and propose strategies that are agile in the fast-changing business environment (Drucker, 2013). The influence of the external environment on SMEs has been subjected to debates (Davidsson, Delmar & Wiklund, 2006; Dobbs & Hamilton, 2007). The

traditional theories of innovation and entrepreneurship have not considered human behaviour to influence entrepreneurial behaviour (Chen & Urban, 2018). Additionally, the individual orientation element to firm performance is often disregarded (Estrin, Korosteleva & Mickiewicz, 2013; Piispanen, Paloniemi & Simonen, 2018). SMEs tend to survive uncertain conditions due to their small size, flexibility, and ability to modify resources quickly (Van Scheers, 2018). These firms implement various entrepreneurial strategies that contribute to economic growth, internal firm innovation to maintain competitive advantage (Kuratko et al., 2009; Morris et al., 2010).

This study explored the influence of organisational internal factors and the innovativeness in SMEs operating in Gauteng Province. The main consideration of Gauteng Province was because of convenience and its contribution to the South African economy (Statistics South Africa, 2017).

1.4 Problem statement

The uncertain environment has resulted in an increasing demand from the government through a mix of policies to support small businesses to contribute to innovation and economic growth (African Development Bank, 2019; Baker & Judge, 2020; Bosma et al., 2020; DST, 2008; Statistics South Africa, 2020). Studies also reveal that there is a significant increase of 40% contribution by the formal SMEs in the emerging economy to the GDP and increased innovativeness (Karadağ, 2016; World Bank, 2020). SMEs that tend to survive the uncertain and competitive business environment are those that adapt corporate entrepreneurship practices, innovation, and technology within the firms (DST, 2008; OECD, 2019; Zahra & Pearce, 1994).

The uncertain environment and an increase in competition amongst these firms have resulted in the need to adopt organisational internal factors and innovative methods as a competitive tool to remain relevant. SMEs will have to implement strategies that allow employees to explore technology to make more of an impact than their competitors in achieving innovativeness (García-Muiña & Navas-López, 2007; Urban & Barreria, 2010; Yunis, Tarhini & Kassar, 2018).

The literature argues that for firms to survive the dynamic, uncertain environment, these firms must adopt organisational internal factors that foster corporate entrepreneurship (Kuratko et al., 2015; Murimbika & Urban, 2014; Phan et al., 2009; Urban, 2017; Urban & Wood, 2015). Kuratko and Morris (2018) stated that the value of corporate entrepreneurship lies within the firm's strategy to participate in on-going innovative action to achieve competitive advantage. It is alongside this subject that the study investigated the influence of organisational internal factors on SMEs' innovativeness in Gauteng Province. The study addresses the following sub-problems:

1.4.1 The first sub-problem is to determine the influence of management support on SMEs' innovativeness.

1.4.2 The second sub-problem is to ascertain the influence of work discretion/autonomy on SMEs' innovativeness.

1.4.3 The third-sub problem is to establish the influence of rewards/reinforcement on SMEs' innovativeness.

1.4.4 The fourth sub-problem is to determine the influence of time availability on SMEs' innovativeness.

1.4.5 The fifth sub-problem is to examine the influence of organisational boundaries on SMEs' innovativeness.

The motivation for the study is embedded in the current South African landscape of SMEs being threatened by the current uncertain and competitive environment as a result of the declining real GDP per capita since 2011 and the impact of COVID-19 on the economy (Bosma et al., 2020; SARB, 2020).

1.5 Research purpose and aims of the study

The purpose of the study is to respond to the current uncertain and increasingly competitive environment that threatens the existence of SMEs and a request from the government to realise the contribution of SMEs to economic growth and job creation. It is therefore imperative to investigate the influence of organisational internal factors and the innovativeness in SMEs in Gauteng Province (Bosma et

al., 2020; Drucker, 2013; Kuratko et al., 2015; Morris et al., 2010). The research investigates the influence of various organisational internal factors on the innovativeness of SMEs in Gauteng Province, South Africa. The study addresses the following aims:

1.5.1 To determine the influence of management support on SMEs' innovativeness.

1.5.2 To ascertain the influence of work discretion/autonomy on SMEs' innovativeness.

1.5.3 To establish the influence of rewards/reinforcement on SMEs' innovativeness.

1.5.4 To determine the influence of time availability on SMEs' innovativeness.

1.5.5 To examine the influence of organisational boundaries on SMEs' innovativeness.

1.6 Conceptual/theoretical definition of terms

1.6.1 Corporate entrepreneurship

Corporate entrepreneurship is a term used to define entrepreneurial behaviour inside established SMEs and large organisations (Morris, Kuratko & Covin, 2008). The definition of corporate entrepreneurship adopted in this study comes from Sharma and Chrisman (1999), who define corporate entrepreneurship as a practice that occurs amongst persons or groups of people inside an existing firm which generates new firms or initiates rejuvenation of innovations that drive novelty within a firm. Similar to Sharma and Chrisman (1999), it is described as a process whereby an individual, or group of individuals, in a firm, creates new firms within the current one or accelerates innovation and strategic renewal within the firm (Hughes, Rigtering, Covin, Bouncken & Kraus, 2018; Kuratko, 2017; Kuratko, Morris & Covin, 2011).

1.6.2 Organisational internal factors or antecedents

Organisational factors (antecedents) consist of the external environmental and internal climate of corporate entrepreneurship that can initiate and motivate the

process of entrepreneurial activities within a firm (Ireland et al., 2009; Kuratko et al., 2011). At the core of this study are the organisational internal factors that describe organisational structure, organisational leadership, culture, and management support (Kuratko et al., 2014). Kuratko et al. (2014) define organisational internal factors as dimensions that are essential determinants for a work setting that is extremely favourable to innovation and entrepreneurial behaviour. The five (5) organisational factors of entrepreneurial behaviour that necessitate innovation and an entrepreneurial environment are mentioned below (Hornsby et al., 2009; Kuratko, 2017; Kuratko et al., 2011):

Management support is the willingness of managers to support entrepreneurial actions throughout an organisation (Hornsby et al., 2009; Kuratko et al., 2015).

Work discretion/autonomy involves a structure that allows employees to make decisions and be creative without supervision (Hornsby et al., 2009).

Reward/reinforcement involves organisational systems that encourage entrepreneurial activities and risk-taking among employees (Kuratko et al., 2014).

Time availability involves time given to employees to allow them to partake in entrepreneurial activities as part of the work schedule (Kuratko et al., 2014).

Organisational boundaries refer to the free flow of knowledge or information internally or externally to achieve entrepreneurial activity (Kuratko et al., 2014).

1.6.3 Innovativeness

Innovation is defined as the effective exploitation of new ideas, which were not identified before, but could contribute positively to a business' competitive advantage and survival. These are executed through the firm's innovative capacity in terms of products, processes, and transformation of leadership to align with the firm's entrepreneurial climate (Gao, Hsu & Li, 2018). Innovativeness is described differently from innovation and is defined as the firm's inclination to engage in creativity, new processes, and experimentation through the introduction of new products or services, as well as having a technology orientated leadership supporting Research and Development (R&D), (Anderson,

Kreiser, Kuratko, Hornsby & Eshima, 2015; Irwin et al., 2018; Kuratko, 2017; Rauch, Wiklund, Lumpkin & Frese, 2009).

1.6.4 SMEs

In South Africa, small-medium enterprises are defined in terms of the National Small Business Act of 1996 as amended by the National Small Business Amendment Acts of 2003 and 2004. The sector classification has been revised and restricted to medium, small, and micro-enterprises. The amended act has classified the sector into two proxies which is the full-time employment equivalent of paid employees and a total annual turnover (RSA, 2018).

Many countries define and classify small-medium enterprises differently. This study adopts the definition in the National Small Business Amendment Act 29 of 2004, which describes small-medium enterprises as a business with fewer than 250 employees in full-time employment, with an annual turnover of less than R 220 million and is managed by one or more owners directly involved in the firm (RSA, 2018). Small enterprises have a maximum limit of 50 full-time employees and a maximum limit of R 80 million for turnover and medium enterprises a maximum limit of 250 full-time employees and a maximum limit of R 220 million turnover (RSA, 2018).

1.7 Contribution of the study

The unfavourable and favourable environment is both seen to provide opportunities or challenges that businesses have to provide solutions that are entrepreneurial and innovative (Brownhilder, 2016; Hameed, 2011). Hence, an entrepreneur must understand the external environment and individual behaviour that influences entrepreneurial behaviour to attain corporate entrepreneurship innovativeness (Chen & Urban, 2018). Globally, SMEs are seen to play a critical role towards the economic performance of both developed and emerging economies. It is mentioned that most of the innovations worldwide are created by SMEs and statistical figures support that various breakthrough innovations are created by small firms, not large firms (Erusmus, Strydom & Rudansky-Kloppers, 2013). SMEs have been identified as vehicles that will provide solutions to the uncertain economic catastrophes, which lead to increased confidence in the

SMEs to stimulate the economy and create employment opportunities (Bosma et al., 2020; Herrington, Kew & Mwanga, 2017).

The importance of the study is to contribute to increasing corporate entrepreneurship identified in SMEs in Gauteng by advancing competitiveness and innovativeness. The study focused on highlighting the influence of organisational internal factors to advance employee motivation, increase innovative behaviour and ultimately, achieve innovativeness within SMEs. The study focused on the entrepreneurial behaviours present in SMEs wishing to encourage and support innovation and competitiveness. The study sought to achieve these elements by investigating the relationship between organisational internal factors and the SMEs' innovativeness to view the positioning of these firm's future market opportunities (Kuratko et al., 2011).

The study looked at the role corporate entrepreneurship plays in SMEs to advance innovativeness and the contribution directed to the economic development in Gauteng, South Africa (Antoncic & Hisrich, 2001). The study contributes to the existing corporate entrepreneurship knowledge and extends research available by looking at its influence on firm innovativeness, focusing on a multi-sectoral approach within a South African context to capture opportunities (Busenitz et al., 2014).

Following the previous studies that focused on senior management as the key actor in corporate entrepreneurship organisational antecedents (Hornsby et al., 2002), this study focused on SMEs' owners and managers. The study analysed the entrepreneurial behaviours present in SMEs to provide the researcher with suggestions to both SMEs' owners and managers on the organisational factors that could be implemented in firms to facilitate innovativeness. The focus was on SMEs in Gauteng Province as the Province remains an important and leading contributor to the economy (Statistics South Africa, 2017). The study provides future researchers with a base to expand this study to other provinces in South Africa.

The research layout is as follows; Chapter 2 discusses the literature review. In Chapter 3, the research methodology is discussed. The results are presented in

Chapter 4 with the discussion of the results in Chapter 5. The conclusions, implications and recommendations are presented in Chapter 6.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The previous chapter introduced and conceptualised the topic of this study. The research gap was identified as organisational internal factors, as discussed from a firm's entrepreneurial behaviour perspective. A critical literature review of entrepreneurship, corporate entrepreneurship, and independent variables (IV) of organisational internal factors that create entrepreneurial behaviour within SMEs are discussed. The discussion resulted in the development of the hypotheses of this study. Finally, a review of the literature about the dependent variable (DV), innovativeness, is presented. The section closes with a conceptual framework built from the literature review.

2.2 Literature background

2.2.1 Entrepreneurship

Entrepreneurship has been described in different forms by various researchers which have inspired the development of research frameworks with a systematic approach (van Burg & Romme, 2014). However, there is a consensus among researchers on the nature of entrepreneurial activities within firms, but confusion and frustration on the terminology that has created discontent (Sharma & Chrisman, 1999). Shane and Venkataraman (2000) describe entrepreneurship as "discovery, evaluation and exploitation of new opportunities" (p. 218).

Entrepreneurship is described as new combinations or innovations that involve new goods, new methods of production, new markets, new sources of raw material or new organisations in any industry (Schumpeter, 1934). In contrast, Gartner (1988) describes entrepreneurship as the creation of organisations. Schumpeter further highlighted the role of an entrepreneur's "creative destruction," which is creating radical technological innovations for economic growth but cautions that most of the radical innovations are not produced by large firms but by small firms (Schumpeter, 1934). Schumpeter refers to this as innovativeness, creating newness, renewal or redefining of firms and markets. Morris et al. (2010) define entrepreneurship as the creation of value through the exploitation of opportunities using unique resources. In line with this,

Schumpeter's theory, referred to as Mark I, has further found that small firms are more likely to produce high-value innovation than larger firms (Baumol, 2005).

Entrepreneurship is further expressed as a process where resources are refocused from a low productive ground into a higher productive ground (Anderson et al., 2015; Kuratko, 2017). Entrepreneurship extends outside the operational and technical skills of a business establishment; it contains and incorporates aspects related to business judgements, the anticipation of market movements, opportunity recognition emanating from anticipation, risk-taking, creativity, innovation, resourcefulness, and actual implementation of the concept (Venter et al., 2015). Comparably, entrepreneurship is described as a process of creating value through a unique combination of resources to exploit opportunities (Kuratko, 2017; Stevenson & Jarillo, 1990).

2.2.2 Corporate entrepreneurship

The theory of corporate entrepreneurship has progressed over the past four decades and numerous definitions have changed substantially over time. Venture teams and simple ideas of how entrepreneurship could occur inside a recognised organisation were the centres of early research in the 1970s (Hanan, 1976; Hill & Hlavacek, 1972; Peterson & Berger, 1971). Researchers in the 1980s have imagined corporate entrepreneurship as an entrepreneurial behaviour necessitating organisational endorsements and resource commitments. The main objective was to achieve value to firms via competency and opportunities achieved through innovations (Burgelman, 1983a, 1983b, 1984; Kanter, 1985; Sathe, 1989; Schollhammer, 1982; Sykes & Block, 1989). The term 'intrapreneurship' was introduced during this period (Goldberg, 1986). Around the 1990s, research changed to focus on optimising and advancing firms' ability to advance skills that are compatible with the creation of innovations (Barringer & Bluedorn, 1999; Birkinshaw, 1997; Borch, Huse & Senneseth, 1999; Jennings & Young, 1990; Merrifield, 1993; Zahra, 1991; Zahra, Kuratko & Jennings, 1999).

During this period, researchers started to redefine corporate entrepreneurship. As an example, Guth and Ginsberg's (1990) proposed a difference between two phenomena: new venture creation within existing organisations and the transformation of on-going organisations through strategic renewal. The process

of corporate entrepreneurship was further defined as a method used by firms or individuals to initiate innovation that could potentially result in the creation of new organisations, renewal of organisations or improved innovation within a firm (Sharma & Chrisman, 1999). Researchers have united the past works into a holistic view, and corporate entrepreneurship has turn out to be a comparatively sound field of study in the 21st century.

Morris et al. (2008) describe corporate entrepreneurship as an entrepreneurial behaviour inside a mid-sized or large organisation. Wang and Zhang (2009) argue that this entrepreneurial behaviour occurs regardless of the size and type of innovation such as a new product, service, or strategy. In essence, this means that corporate entrepreneurship emerges in both large organisations and SMEs. This clarifies that firm size is not a determinant of corporate entrepreneurship's entrepreneurial behaviour, but rather it can influence the level of corporate entrepreneurial behaviour. Zahra and Garvis (2000) describe corporate entrepreneurship as the overall company effort directed at innovation, pro-activeness and risk-taking. These efforts are critical towards revitalisation and renewal of established companies and improvement in performance.

The expansion of innovation competencies through corporate entrepreneurship has constantly received attention through the years. However, this innovation was developed in various ways, as shown in certain articles (Ahuja & Lampert, 2001). Kuratko et al. (2014) indicate corporate entrepreneurship as a firm's ability to innovate uninterruptedly in order to maintain relevance in the changing global environment. Zahra, Randerson, and Fayolle (2013) contend that corporate entrepreneurship has expanded to involve the skills and attributes that drive organisational alertness and the interaction between these skills and a fast-developing external environment. Hagel (2016) argues that the pace at which the external environment is changing and the effect on the firm's ability to maintain relevance has necessitated innovative ways to perform work and change the mindset of employees. He further argues that the main element of organisational growth is embedded in its ability to improve opportunity identification and increase the propensity for risk amongst employees. The essence of his argument is based on the need to embrace more entrepreneurial employees. Theorising all these

viewpoints that are presenting new perceptions, it is clear that corporate entrepreneurship is an intricate phenomenon, and it can take various forms. As a result, a modern approach distinguishes areas into which these corporate entrepreneurial activities can be classified.

2.2.3 Corporate entrepreneurship and entrepreneurship in emerging markets

Corporate entrepreneurship is described as the existence of entrepreneurship within an existing firm, exhibiting an existing process, regardless of the firm size and leads to new businesses, activities, and innovative developments (Antoncic & Hisrich, 2001). Therefore, the rewards and principles of corporate entrepreneurship are not restricted to large firms in developed economies (Hitt, Ireland, Sirmon & Trahms, 2011). SMEs are associated with spontaneous innovative capabilities while large firms tend to suffer from the innovative process due to their formalised operating ways (Baumol, 2005; Schaeffer, 2015).

Considering the above statement, it is further mentioned that the advantages and disadvantages of SMEs above large firms are characterised by entrepreneurial behaviours (Vossen, 1998). Reflecting on the above, it is this important link between SMEs and corporate entrepreneurship that could validate organisational internal factors that support corporate entrepreneurship within any firm size. Corporate entrepreneurship in emerging markets with specific emphasises on the firms' strategic renewal, innovation, venturing into new markets, is an important driver for competitive advantage for firms in emerging economies (Covin & Slevin, 1991).

Corporate entrepreneurship provides ways through which emerging economies SMEs can take entrepreneurial transformations to revive activities, reconfigure, transform resources and provide an entrepreneurial mindset within uncertain environments (de Villiers-Scheepers, 2012; Luo, Zhao, Wang & Xi, 2011; Wang, Hong, Kafouros & Wright, 2012; Yiu & Lau, 2008). Even though there is extensive literature review available in terms of the drivers of corporate entrepreneurship (Phan et al., 2009; Sakhdari, 2016), however, there is still limited review on corporate entrepreneurship in the context of SMEs in the emerging markets (Demirkan, Yang & Jiang Crystal, 2019). Emerging markets varies institutionally,

economically, culturally, socially and technologically, compared to developed countries; hence it is important for this study to investigate the entrepreneurial behaviours in SMEs in the emerging economies (Liu & Vrontis, 2017; Zoogah, Peng & Woldu, 2015).

2.2.4 Corporate entrepreneurship and entrepreneurship in South Africa

The South African economy is presented as one of the leading growing and emerging economies in Africa (Bosma et al., 2020). SMEs continue to face environmental challenges that require the government to provide policies that assist them to create employment and reduce poverty (Bosma et al., 2020). In South Africa, there are external factors (financial and management) and internal factors (economic, market, and infrastructure) that affect SME's contribution to economic growth (Fatoki & Garwe, 2010; Koevos, 2017).

Despite these challenges that limit entrepreneurial initiatives, SMEs in developing countries contribute significantly to the GDP (Cusmano et al., 2018). The SMEs that face resource constraints in emerging economies may find it difficult to provide better innovative solutions to their competitors (Hermann, Kessler, & Fink 2010). It is therefore vital that the South African government place special interest that enhance the development of SMEs and positively impact the economy (Ayandibu & Houghton, 2017).

Noting the importance of SMEs to reduce unemployment and prevent crime in Africa (Ayandibu & Houghton, 2017), it is important to focus on entrepreneurial behaviour that will enhance innovation and provide economic growth (Urban, 2016). The content of this study is significant, bearing in mind that firms in African countries tend to be poorly managed (Bloom et al., 2012; Zoogah et al., 2015).

2.2.5 Domains of corporate entrepreneurship

Corporate entrepreneurship within firms is demonstrated through corporate venturing or strategic entrepreneurship (Kuratko & Audretsch, 2013; Kuratko et al., 2011). The establishment of unique and innovative firms is associated with corporate venturing. This initiative considers two aspects, namely internal corporate ventures (ICVs) and external corporate ventures (EVCs). Internal corporate ventures focus on the establishment of unique firms within the existing

firm structure whilst external corporate ventures are focussed on the establishment of unique firms outside the existing firm structure (Kuratko et al., 2009). These external firms are typically very new ventures, joint ventures, or early growth-stage firms (Covin & Miles, 2007; Kuratko et al., 2011).

A firm that strive to maintain competitive advantage creates initiatives that focus on implementing entrepeneurial activities or innovations. This type of approach is linked to strategic entrepreneurship. A firm that drives strategic entrepreneurship focussess on various aspects that assist the firm to achieve innovations, such as the firm's strategy, product offerings, markets, internal organisations and business model (Kuratko & Audretsch, 2013; Morris et al., 2010). The firm's ultimate differentiation from its competitors is associated with evidence of strategic entrepreneurship in terms of current transformation relative to before and how different this transformation is relative to industry standards.

Firms that implement innovations concentrate on achieving strategic entrepreneurship using any of the methods that drives a firm's strategic capabilities. These methods focus on unique strategies, products or services, optimising market approach, improvement of existing innovative strategies and optimising existing business model (Covin & Miles, 1999; Dess et al., 2003; Hitt, Ireland, Camp & Sexton, 2001; Ireland, Hitt & Sirmon, 2003; Ireland & Webb, 2007; Kuratko & Audretsch, 2009).

Related to these domains and activities is the notion of entrepreneurial orientation which was developed in theory by looking at the firm's entrepreneurial behaviours in terms of innovativeness, risk-taking and proactiveness (Covin & Slevin, 1989, 1991; Miller, 1983). These three dimensions of entrepreneurial orientation are described as key drivers of increased performance within a firm (Covin & Miller, 2014; Urban & Verachia, 2019). South Africa's primary focus is to achieve economic growth by initiating innovativeness within the South African SMEs, despite the persistent economic challenges (Urban, 2016).

2.2.6 Corporate entrepreneurship strategy

The willingness of firms to implement routine innovation comes with substantial risks that the firm must accept (Miller & Friesen, 1982). Realistic risks are required

within the firm to determine the firm's current operating position and future feasibility (Sykes & Block, 1989). Organisations that are competitive and innovative tend to adapt to the complex uncertain environment and create change within these environments (Kuratko et al., 2009). This understanding of the firm's position within the competitive environment addresses entrepreneurship and the strategy boundary (Covin & Slevin, 1991).

Actions that are implemented to create competitive advantage and exploit them entrepreneurially are seen as employing entrepreneurial strategy (Kuratko et al., 2011). Corporate entrepreneurship provides strategies that promote innovation and competitive environments for growth (Kuratko et al., 2015; Phan et al., 2009). Corporate entrepreneurship is viewed as the organisational strategy that advances the exploration and exploitation of new opportunities (Floyd & Lane, 2000; Ireland et al., 2009). A corporate climate that promotes corporate entrepreneurship needs to provide management support, rewards, clear goals, and organisational values to achieve positive entrepreneurial behaviour (Hornsby et al., 2009).

Management needs to establish organisational internal factors or antecedents within the firm to obtain an environment that facilitates corporate entrepreneurship (Hornsby et al., 2009; Hornsby et al., 2002; Ireland et al., 2009). This study attempts to provide insight into the strategic intention from managerial actions that create an entrepreneurial environment as well as enhancing the employee's entrepreneurial behaviour to achieve organisational innovativeness (Hornsby et al., 2013; Ireland et al., 2009).

Firms rely on their organisational internal factors in their pursuit of an organisation that support and implement management support, leadership and culture (Kuratko et al., 2014). Firms with an integrated approach towards corporate entrepreneurship tend to have a clear vision and an organisation wide reliance on entrepreneurial behaviour. These are aimed to reinvigorate organisations and allow them to improve by better recognising and exploiting entrepreneurial opportunities purposefully and continuously (Ireland et al., 2009).

At the centre of the integrative model is the strategic intention that creates an entrepreneurial activity mindset and a supportive environment for employees which stimulates entrepreneurial process and behaviour within a firm (Hornsby et al., 2009; Ireland et al., 2009). The strategies are greatly motivated by the external environment conditions of the firms; however, it is also supported by an internal climate that is favourable to entrepreneurial activities. Models have been developed by researchers to demonstrate how the corporate entrepreneurship strategy is integrated within an organisation and successful implementation of innovative strategies is crucial for companies (Ireland et al., 2009; Kuratko et al., 2014).

The integrative model in figure 1 below shows the connection between the external environmental conditions, the individual cognition and the organisational architecture that stimulates corporate entrepreneurship in a firm (Ireland et al., 2009). The model below demonstrates the firm strategy and the essential components such as entrepreneurial strategic vision, and a pro-entrepreneurship organisational architecture that drives the strategy development. The organisational internal environment is critical for implementing a successful corporate entrepreneurship (CE) strategy (Hornsby et al., 2013; Hornsby et al., 2009; Hornsby et al., 2002; Ireland et al., 2009; Kuratko et al., 2014).

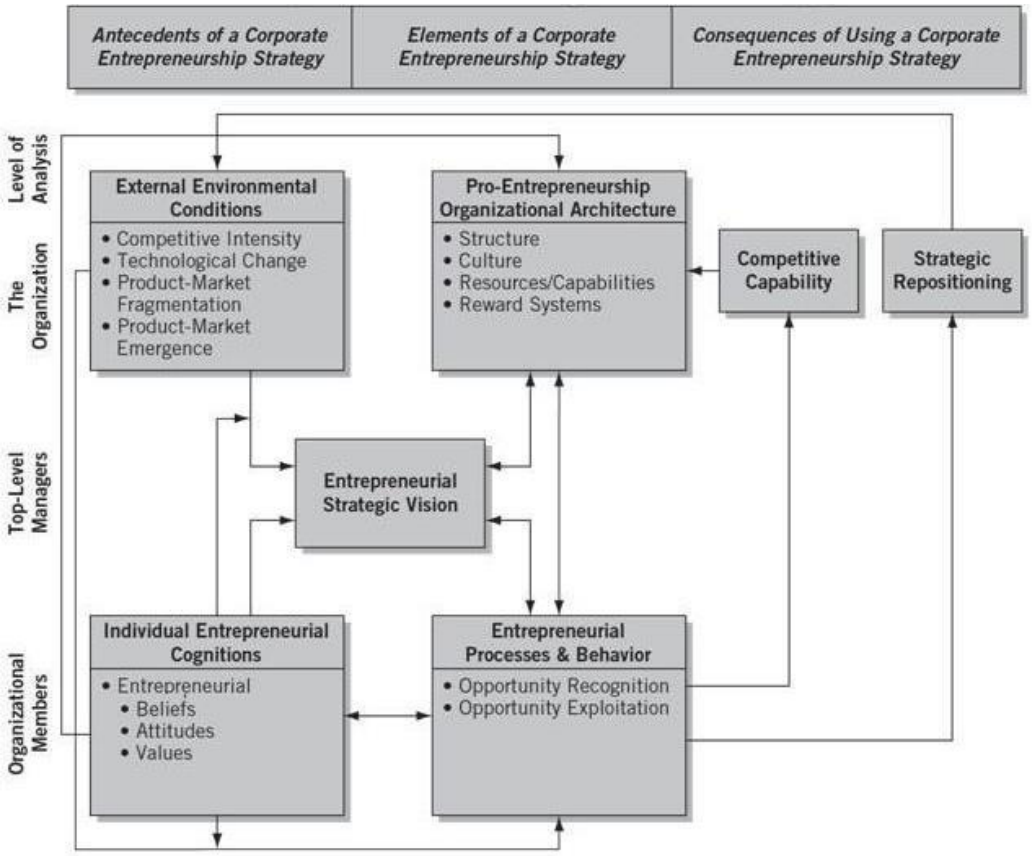

Figure 1: An integrative model of corporate entrepreneurship strategy.

Source: Ireland et al. (2009, p. 24).

2.2.7 Innovativeness

Innovativeness is the firm's inclination to adopt new technologies, which demonstrate the firm's ability to adjust to different environments (Kitchell, 1995). Lumpkin and Dess (1996) define innovativeness as the organisation's inclination to employ and encourage the behaviour of novel concepts, originality, experiment, innovative process, technology process and the need to try something new. It is this propensity from the firm to engage in and support new ideas, novelty, experiment, creative process, and a technological process that determines its innovativeness (Lumpkin & Dess, 1996). Innovation within a firm is described by the actual implementation of new products, processes, or services, while innovativeness is the desire to create or adopt a new process (Kamaruddeen, Yusof & Said, 2010).

Innovativeness reflects the firm's capability to create value through the development of new products and services and its tendency to support new ideas, novelty, and experimentation that produce new services or technological processes (Covin & Lumpkin, 2011; Lumpkin & Dess, 1996). It is argued that a firm's commitment to innovativeness is visible in the firm's behaviour to try something new, attempt to discover new products or technological developments (Kamaruddeen et al., 2010; Lumpkin & Dess, 1996). An organisation's internal strategy shows its innovative commitment and attitude to innovation (Salavou, 2005; Wilson, Ramamurthy & Nystrom, 1999).

Table 1 below adapted from Ireland et al. (2009), consolidates prior research on this topic.

Table 1: Summary of entrepreneurial phenomena in small-medium organizations

Author(s)	Focal entrepreneurial phenomenon	Locus of entrepreneurship	Relationship between entrepreneurship phenomenon and innovativeness
Schumpeter (1934)	Disturbance of equilibrium to the market through the introduction of new product-market combinations or innovations.	Entrepreneur /individual/organisational members	Entrepreneurial behaviour that is innovative lead to innovativeness.
Sharma and Chrisman (1999)	Internal corporate venturing (ICV).	Individuals creating new organisations, initiating renewal, or innovation within an existing organisation.	Innovativeness is an act of allowing individuals to initiate innovative activities within a firm.
Burgelman (1983b)	Internal corporate venturing.	Corporate management, new venture division management, group leader/venture manager.	Innovativeness can result from new business activities of internal venturing.

Author(s)	Focal entrepreneurial phenomenon	Locus of entrepreneurship	Relationship between entrepreneurship phenomenon and innovativeness
Guth and Ginsberg (1990)	Internal corporate venturing and strategic renewal.	Not specified	The strategy directly affects internal corporate venturing and strategic renewal.
Ireland et al. (2009)	Corporate entrepreneurship Strategy	An organisational strategy that advances the exploration and exploitation of new opportunities	Corporate entrepreneurship strategy within a firm leads to the adoption of innovative activities.
(Covin & Miles, 1999; Dess et al., 2003; Hitt et al., 2001; Ireland et al., 2003; Ireland & Webb, 2007; Kuratko & Audretsch, 2009)	Strategic renewal sustained regeneration, domain redefinition, organisational rejuvenation and business model reconstruction.	Managerial roles that facilitate implementation of firm strategy.	Entrepreneurial activities and innovations implemented to attain competitiveness.
(Covin & Slevin, 1989, 1991; Miller, 1983)	Entrepreneurial orientation.	Not specified.	Not specified.
Floyd and Lane (2000)	Strategic renewal.	Top, middle and operating level management.	Strategic renewal process leads to changes in strategy.
Kuratko et al. (2014)	Individual-level entrepreneurial behaviour.	Individual/organisational members.	An organisational culture that facilitates innovativeness.
Hornsby et al. (2002)	Individual-level entrepreneurial behaviour.	Middle-level managers.	Allowing exploration of innovative ideas.
Hornsby et al. (2009)	Individual-level entrepreneurial behaviour	Senior manager and middle-level managers.	Entrepreneurship climate allows innovative ideas and resources for entrepreneurial action
Hornsby et al. (2013)	Individual-level entrepreneurial behaviour	Individual/ organisational members/management.	Organisational factors lead to entrepreneurial activities or outcome.

Author(s)	Focal entrepreneurial phenomenon	Locus of entrepreneurship	Relationship between entrepreneurship phenomenon and innovativeness
Zahra and Garvis (2000)	Entrepreneurial orientation	Not specified	Innovativeness is achieved through a strategy that supports creativity, new products and services
(Covin & Miller, 2014; Urban & Verachia, 2019)	Entrepreneurial orientation	Top and middle-level management serving as a proxy for firms	Elements of organisational architecture associated with firm performance

Source: Own compilation adapted from Ireland et al. (2009, p. 22).

2.3 Hypotheses discussion

2.3.1 Organisational internal factors

To comprehend what forms an effective internal organisational environment for entrepreneurial activity, it is essential to know the antecedents of employee entrepreneurial behaviour. There is extensive literature that highlights the influence of organisational antecedents on individual-level entrepreneurial behaviour (Holt, Rutherford & Clohessy, 2007; Hornsby, Kuratko & Montagno, 1999; Hornsby et al., 2009; Hornsby et al., 2002; Kuratko, Ireland, Covin & Hornsby, 2005; Kuratko, Montagno & Hornsby, 1990; Morris, Allen, Schindehutte & Avila, 2006; Morris & Jones, 1993; Zahra, 1991). Kuratko et al. (1990) established five individual factors that stimulate and encourage entrepreneurial behaviour by middle management.

The identified factors are top management support for corporate entrepreneurship, reward and resource availability, organisational structure, and boundaries, risk-taking, and time availability. Figure 2 below, demonstrates management's perception of the firm's internal environment as an important element that facilitates and encourages corporate entrepreneurship (Hornsby et al., 2002; Kuratko et al., 1990).

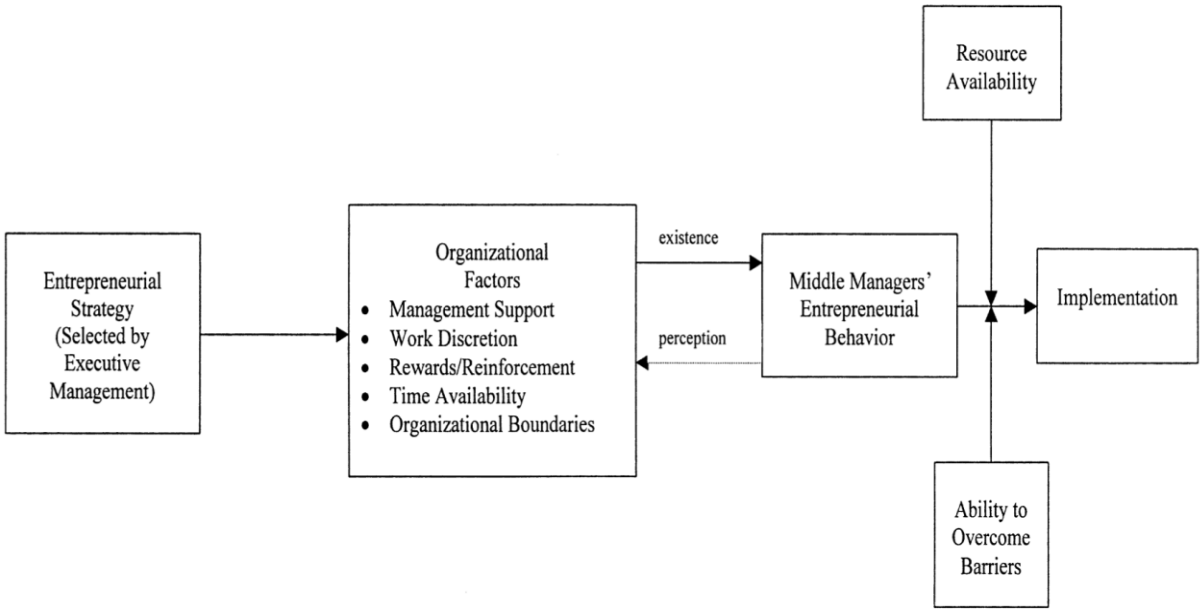

Figure 2: Middle manager's perception of the internal environment for corporate entrepreneurship.

Source: Hornsby et al. (2002, p. 261).

Hornsby et al. (2002) established the corporate entrepreneurship assessment instrument (CEAI) that provides an evaluation of the employee's insights into the organisational climate for corporate entrepreneurship within a firm. According to Hornsby et al. (2013, p. 938), the CEAI is a "critical tool to advance research in the area of organizational antecedents to corporate entrepreneurship and provide insight into the important consideration of pro-entrepreneurship organizational architecture." The CEAI contains 48 Likert questions that were used to evaluate the antecedents of entrepreneurial behaviour.

The CEAI measures the level at which individuals within a firm perceives the existence of the five antecedents as important to provide an environment favourable for individual entrepreneurial activity (Kuratko et al., 2014). These antecedents/internal organisational factors are management support, work discretion/autonomy, rewards/reinforcement, time availability and organisational boundaries. A firm that provides an environment that encourages entrepreneurship through rewards, top management support and work discretion to the employees tends to achieve a positive entrepreneurial outcome (Hornsby

et al., 2009; Taştan & Davoudi, 2017). These organisational internal factors are concisely explained below supported by theory and previous research to point out their role in the formulation of this study's hypotheses.

2.3.1.1 Management support

According to Scheepers, Hough, and Bloom (2008), top management and the firm's willingness to embrace new ideas and to link promotion or career progressions to entrepreneurial orientation is described as corporate entrepreneurship. Management needs to create an environment that supports creativity, risk-taking and innovation from employees and these are reflected in the employee's outputs (Hornsby et al., 2002). Dess and Lumpkin (2005), similarly, cite that firms with an entrepreneurial mission use a top-down approach to encourage entrepreneurial activity, which means that the top management of firms needs to support programmes and incentives that promote a climate of entrepreneurship. On the other hand, many of the best ideas of new corporate ventures or innovation come from the bottom up.

Therefore, senior, and middle management need to create a conducive environment that facilitates corporate entrepreneurship and exploits employee entrepreneurial behaviour (Kuratko et al., 2015). The strategies developed by management must stimulate innovativeness within the employees (Hambrick & Mason, 1984; Ireland et al., 2009). Management support can be reflected through creativity and entrepreneurial behaviour visible within the organisation (Hornsby et al., 2002). It has been found that organisational innovativeness outcome has a direct connection with management support (Kuratko et al., 2014), thus stating that higher levels of organisational innovativeness arise from higher levels of management support. Established from this literature, the first hypothesis predicts that:

Hypothesis - H1a: There is a positive relationship between the organisational antecedent of management support and SMEs' innovativeness.

2.3.1.2 Work discretion /autonomy

Management and the organisation must be willing to allow the employees to take calculated risks (Hornsby et al., 2002). Work discretion or autonomy determines

the level at which employees are provided with decision making powers and responsibilities in their positions, the level of failure the firm can tolerate and freedom to follow own initiatives (Kuratko et al., 2014; Scheepers et al., 2008). Work discretion provided to the employees can be seen as the autonomy of employees to make decisions without endless supervision (Hornsby et al., 2009). Management needs to put in place a delegation structure as part of the overall firm strategy (Ireland et al., 2009). Based on this literature, the second hypothesis predicts that:

Hypothesis – H1b: There is a positive relationship between the organisational antecedent of work discretion/autonomy and SMEs' innovativeness.

2.3.1.3 Rewards/reinforcement

A reward system in an organisation encourages entrepreneurial thinking and actions from employees and could be initiated within the firm's strategy (Ireland et al., 2009). Rewards that are aligned to the organisational and individual goals create a positive culture within the firm (Hornsby et al., 2009). Management needs to be cognisant that employees within a firm have unique needs, therefore are motivated differently and managers need to accommodate this aspect when designing the rewards systems within a firm (Bayarçelik & Özşahin, 2014). Based on this literature, the third hypothesis predicts that:

Hypothesis – H1c: There is a positive relationship between the organisational antecedent of rewards/reinforcement and SMEs' innovativeness.

2.3.1.4 Time availability

Time availability allows employees to concentrate on the other aspects of the work that have corporate entrepreneurship impact (Hornsby et al., 2009). Human resources available within an organisation can take a risk and tolerate failure if they are given the space and time to perform their work (Ireland et al., 2009). Time and resource availability assist corporate entrepreneurs to explore and exploit opportunities which are regarded as tasks outside their normal working schedule (Kuratko et al., 2014). Established from this literature, the fourth hypothesis predicts that:

Hypothesis – H1d: There is a positive relationship between the organisational antecedent of time availability and SMEs' innovativeness.

2.3.1.5 Organisational boundaries

An organisation needs to create an environment that allows the free flow of information or knowledge with the internal and external environment, as this facilitates quick decision making within the organisation (Hornsby et al., 2009). Organisational boundaries within a firm provide a conducive environment that allows employees to make decisions (Burgess, 2013). Kuratko et al. (2014) argue that innovative performance outcomes are visible when innovation is considered as a significant and structured process rather than a disordered one. In line with prior literature, the last hypothesis predicts that:

Hypothesis – H1e: There is a positive relationship between the organisational antecedent of organisational boundaries and SMEs' innovativeness.

Figure 3 below gives a virtual overview of the conceptual framework of this study. The conceptual framework is derived from the literature presented above.

2.4 Conceptual framework of hypotheses

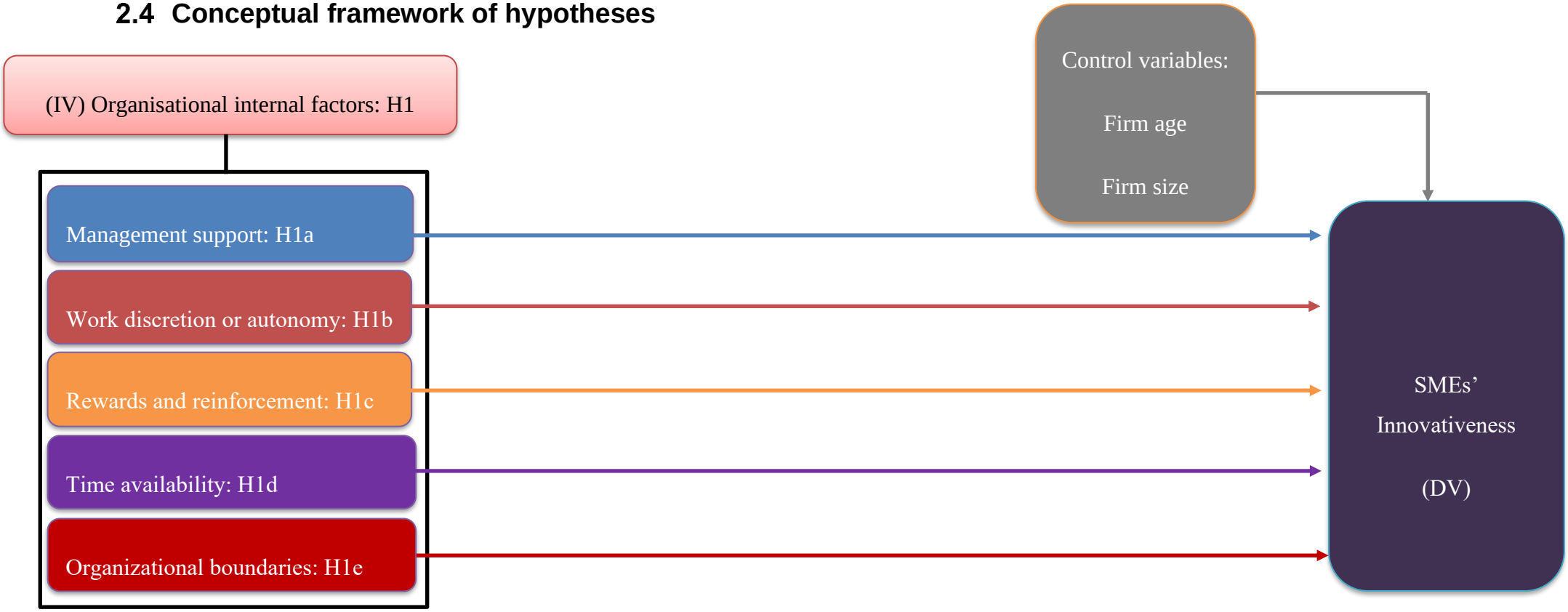

Figure 3: Conceptual model of organisational internal factors and SMEs' innovativeness.

Source: Own conceptual model

2.5 Conclusion of Literature Review

This chapter discussed the literature focusing on corporate entrepreneurship as independent variables and innovativeness as a dependent variable. The study further incorporated the notion of corporate entrepreneurship within SMEs operating in Gauteng. The study focused on investigating the internal organisation factors with SMEs that drive innovativeness. Arguments related to previous literature were discussed and hypotheses were formulated. A conceptual model was also developed. The conceptual framework hypothesised a positive relationship between the organisational internal factors and the innovativeness. The next chapter focuses on the research methodology that was used.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

The previous section discussed the literature and conceptualised the study. This section discusses the research methodology that was implemented during the research process. The chapter focuses on the methodological concepts, the research paradigm, research design, data collection procedure, the population and sampling, research instrument, data analysis, validity, reliability of the instrument and ethical considerations.

3.2 Research Methodology /Paradigm

A research paradigm is defined as opinions that guide the researcher's activities (Lincoln, Lynham & Guba, 2011). The study is guided by the philosophical assumptions that are grounded on the post-positivist paradigm which employs a scientific nature and quantitative approach using primary data (Creswell, 2013). The post-positivist is argued to signify the thinking after the positivists (Phillips, Phillips & Burbules, 2000).

This type of approach is based on the assumption that reality is steady and can be viewed and explained from an unbiased opinion and that the entire accuracy can never be found (Phillips et al., 2000). This type of approach will avoid biased reasoning while analysing and interpreting data. Also, deductive logical reasoning will acknowledge the use of existing rules, assumptions, findings, and theories to develop conclusions and data generalisation (Creswell, 2013).

The post positivism approach was deemed to be more appropriate over the positivism approach because studies such as this one is unlikely to result in the absolute certainty of conclusions. Furthermore, positivism takes an epistemological approach and does not provide ontological consideration (Cooper & Schindler, 2014). Alternatively, using the post positivism approach assumes that it is possible to achieve objective results without absolute certainty. Additionally, the post positivism approach provides the researcher with a base to focus on ontological consideration (Creswell, 2013).

3.3 Research Design

The research design that was followed for this study was guided by a quantitative approach (Creswell, 2013). A cross-sectional study using survey methods of collecting data was used and the method that was used is non-experimental quantitative (Cooper & Schindler, 2014).

An online survey was a self-administered questionnaire. These are described as the appropriate and best used techniques for quantitative studies (Cooper & Schindler, 2014; Field, 2009). The key advantages of this method are quick data collection and a cost-effective way to access owners and managers within the SMEs in Gauteng (Cooper & Schindler, 2014). The disadvantages that come with this type of method were low response due to access to internet, busy schedules of the targeted audience.

3.4 Population and Sample

3.4.1 Population

The research population consisted of SMEs in Gauteng Province based on convenience. The population is estimated at approximately 73 320 SMEs registered on the National Small Business Chamber (NSBC, 2020) database and the government Central Supplier Database. The study considered that this number may vary because there is no central database that captures all the SMEs and studies have mentioned that it is difficult to quantify small businesses because of the categorisation in terms of formal and informal companies, some of these companies are registered, but some are not registered (Galawe, 2017).

Hence, the identified number is just an estimation which excludes some of the SMEs that are registered on other available databases in South Africa. The SMEs are described, based on the National Small Business Amendment Act 29 of 2004 which defines SME in terms of total full-time equivalent (FTE) of paid employees and an annual turnover in South Africa (RSA, 2018).

The targeted population sampling selection criteria were based on the maximum limits of total full-time equivalent (FTE) of paid employees which is classified as Medium = 250 employees, and Small = 50 employees and annual turnover

maximum limits classified as Medium = R220 million, and Small = R80 million. Moreover, the SMEs are represented by owner-managers who presently own and manage these firms (Kelley, Singer & Herrington, 2012). The owner-managers in SMEs are usually involved with overseeing planned activities of the entire firm (Venkataraman, 1997). The study took a multi-sector approach using the standard industrial classification for the sectors represented by SMEs in Gauteng (Statistics South Africa, 2012).

3.4.2 Sample and sampling method

The sample was drawn from the National Small Business Chamber (NSBC, 2020) and the government Central Supplier Database. The NSBC has South African SMEs registered for a business membership, while the government Central Supplier Database record suppliers for tendering purposes and/or doing work with the State and/or State-Owned Enterprises. The reasons for using the National Small Business Chamber is because of its commitment to assist SMEs to grow and the reasons for using the government Central Supplier Database is to capture the suppliers that are conducting business with State-Owned Enterprises and/or the State.

The SMEs were accessed through the networking seminars that are conducted on a regular basis and emails accessed from the supplier's central database. Probability sampling was used because it agrees with the generalisation of the study (Creswell, 2013). A simple random selection was used, and it afforded all SMEs inside the sampling frame an equivalent chance of being chosen. Additionally, more representation can be drawn from the sample. This approach could reduce the sampling error and bias (Creswell, 2012).

The sampling frame was based on South African SMEs that are operating in Gauteng. The SMEs' sampling selection criteria considered firms' age (one year and above of company existence), and also firm size (full-time employees). The firms that met the above criteria and are registered on the National Small Business Chamber database, government Central Supplier Database and other active databases across Gauteng were considered. Previous studies have found some of these control variables to influence some variables (Autio & Acs, 2007).

After considering the sample frame, the SMEs population size (N) of 73 320 was identified from the National Small Business Chamber and the government Central Supplier Database. The calculation for sample size considered 95% confidence level and 5% margin of error. The calculation specified a sample size of 383 as suitable (Daniel, 1999; Krejcie & Morgan, 1970). The questionnaires were distributed through a Qualtrics email link to owners or managers of the SMEs. The study attained 272 responses that were used for analysis.

Table 2: Sampling of respondents

Description of respondent type	Number to be sampled
Owners and managers	272

Data Source: Government Central Supplier Database & National Small Business Chamber database

3.5 The research instrument

The research instrument managed for this study was an online self-administered questionnaire. The self-administered questionnaire allowed privacy, fairness, and reduced contact between the researcher and the participants. The instrument that was used for the study was the CEAI which was first developed by Kuratko et al. (1990) and modified by Hornsby et al. (2002). The CEAI has been used in several kinds of research and has been tested to be valid and reliable (Kuratko et al., 2014). The survey was conducted by approaching SME owners and managers to acquire insights into entrepreneurial behaviour within their companies (Morris et al., 2010; Urban & Wood, 2015). The research instrument measured five (5) important aspects aligned to the hypotheses which are outlined in table 3 below.

Table 3: Measures used in the study for organisational internal factors

Constructs	Literature	Dimensions	Items	Questions
Organisational internal factors (IV) Measured on 7-point Likert scale: '1= strongly disagree' to 7 = 'strongly agree'	(Ireland et al., 2009; Kuratko et al., 2015; Kuratko et al., 2014)	Management support	MS1	Our organization is quick to use improved work methods.
			MS2	Our organization is quick to use improved work methods that are developed by workers.
			MS3	In our organization, developing one's own ideas is encouraged for the improvement of the corporation.
			MS4	Upper management is aware and very receptive to employees' ideas and suggestions.
			MS5	A promotion usually follows from the development of new and innovative ideas.
			MS6	Those employees who come up with innovative ideas on their own often receive management encouragement for their activities.
			MS7	The ''doers on projects'' are allowed to make decisions without going through elaborate justification and approval procedures.
			MS8	Senior managers encourage innovators to bend rules and rigid procedures to keep promising ideas on track.
			MS9	Many top managers have been known for their experience with the innovation process.

			MS10	Money is often available to get new project ideas off the ground.
			MS11	Individuals with successful innovative projects receive additional rewards and compensation beyond the standard reward system for their ideas and efforts.
			MS12	There are several options within the organization for individuals to get financial support for their innovative projects and ideas.
			MS13	People are often encouraged to take calculated risks with ideas around here.
			MS14	Individual risk-takers are often recognized for their willingness to champion new projects, whether eventually successful or not.
			MS15	The term ‘‘risk-taker’’ is considered a positive attribute for people in this organization.
			MS16	This organization supports many small and experimental projects, realizing that some will undoubtedly fail.
			MS17	An employee with a good idea is often given free time to develop that idea.
			MS18	There is a considerable desire among people in the organization for generating new ideas without regard for crossing departmental or functional boundaries.
			MS19	People are encouraged to talk to employees in other departments of this organization about ideas for new projects.

	(Hornsby et al., 2009; Hornsby et al., 2002; Kuratko et al., 2014)	Work discretion	WD1	Employees are given the freedom to make decisions without having to double-check all their decisions with someone else.
			WD2	Harsh criticism and punishment result from mistakes made on the job.
			WD3	This organization provides employees with the chance to be creative and try their own methods of doing the job.
			WD4	This organization provides employees with the freedom to use their own judgment.
			WD5	This organization provides employees with the chance to do something that makes use of their abilities.
			WD6	Employees have the freedom to decide what to do in their job.
			WD7	It is an employee's responsibility to decide how their job gets done.
			WD8	Employees almost always get to decide what to do on their job.
			WD9	Employees have much autonomy in their job and are left on their own to do their work.
			WD10	Employees seldom have to follow the same work methods or steps for doing their major tasks from day to day.
			RR1	Management help employees get their work done by removing obstacles and roadblocks.

	(Bayarçelik & Özşahin, 2014; Hornsby et al., 2009)	Rewards/Reinforcement	RR2	The rewards employees receive are dependent upon their innovation on the job.
			RR3	Employee supervisors will increase employee job responsibilities if they are performing well in their job.
			RR4	Employee supervisor gives employees special recognition if their work performance is especially good.
			RR5	Employee manager tells his/her boss if employee work was outstanding.
			RR6	There is a lot of challenges in the employees' job.
	(Hornsby et al., 2009; Kuratko et al., 2014)	Time availability	TA1	During the past three months, employee workload kept them from spending time on developing new ideas.
			TA2	Employees always seem to have plenty of time to get everything done.
			TA3	Employees have just the right amount of time and workload to do everything well.
			TA4	Employees' job is structured so that they have very little time to think about wider organizational problems.
			TA5	Employees feel that they are always working with time constraints on their job.
			TA6	Employees and their co-workers always find time for long-term problem-solving.
		Organisational boundaries	OB1	In the past three months, employees have always followed standard operating procedures or practices to their major tasks.

	(Burgess, 2013; Hornsby et al., 2009; Kuratko et al., 2014)		OB2	There are many written rules and procedures that exist for employees to do major tasks.
			OB3	Employees do not doubt what is expected from them on their job.
			OB4	There is little uncertainty in the employees' job.
			OB5	During the past year, immediate supervisor discussed their employees work performance with them frequently.
			OB6	The employees' job description specifies the standards of performance on which their job is evaluated.
			OB7	Employees know the level of work performance that is expected from them in terms of amount, quality, and timelines of output.

The SMEs' innovativeness was measured using an instrument developed by Plambeck (2012) and validated by Urban (2017). The instrument questionnaire structure was closed-ended questions (Cooper & Schindler, 2014). The research instrument measured innovativeness based on the participant's view of innovation opportunities within the firms and table 4 below outlines the measures used.

Table 4: Measures used in the study for innovativeness

Constructs	Literature	Dimensions	Items	Questions

Innovativeness (DV) Measured on 7-point Likert scale: '1= strongly disagree' to 7 = 'strongly agree'	(Covin & Lumpkin, 2011; Kamaruddeen et al., 2010; Lumpkin & Dess, 1996)	Innovativeness	INNO1	Our company has identified the technique or methods that are highly innovative and totally new to the industry.
			INNO2	Our company has identified techniques or methods that are one of their kind in the industry.
			INNO3	Our company has identified techniques or methods that relied on technology that has not been used in the industry before.
			INNO4	Our company has identified techniques or methods that have unique features.
			INNO5	Our company place a strong emphasis on innovative products or services.
			INNO6	Our company has a widely held belief that innovation is an absolute necessity for the business's future.

The questionnaire was measured with a Likert scale of one (1) to seven (7), measuring an individual's perception, where one (1) is strongly disagrees and seven (7) is strongly agrees. The Likert scale measured the ordinal level and ranked the data (Murimbika & Urban, 2014). The questionnaire consisted of three sections with sub-instruments, the first part of the questionnaire was Section A which consisted of eight (8) items that measured demographics (individual or firm factors). The study also considered firm and individual factors that were revealed in previous research to impact corporate entrepreneurship as control variables (Autio & Acs, 2007; Naldi & Davidsson, 2014) namely, firm age and size.

Section B measured the five (5) organisational internal factors as per the hypotheses: management support which consisted of nineteen items, work discretion or autonomy consisted of ten items, rewards and reinforcement consisted of six (6) items, time availability consisted of six (6) items and organisational boundaries consisted of seven (7) items. Section C measured SMEs' innovativeness and it considered six (6) items. The measurement focused on the owners' and managers' perception of innovation opportunities presented to employees within the firm (Plambeck, 2012; Urban, 2017).

3.6 Procedure for data collection

The data was collected from the target population through an online survey using Qualtrics without printing the questionnaires. The survey consisted of questionnaires which were distributed to the participants through emails generated from Qualtrics. The Qualtrics software generated a link that was accessed through laptops, smartphones, desktop computers, and also stored the responses received from the participants.

3.7 Data analysis and interpretation

Online survey responses were obtained through Qualtrics and the data was exported into a statistical programme (SPSS) to analyse the data. The programme that was used is easy to use for data clean-up and analysis (Field, 2013). The data was subjected to a screening process to ensure that the data met the requirements for further analysis. The data screening process checked

for errors, missing values, coding, and reverse questions. Once the data quality check was satisfactory, a descriptive statistical analysis was conducted to check completeness and violation of any statistical assumptions (Field, 2013).

Developing from the descriptive analysis conducted, validity and reliability were tested for the constructs using diverse statistic techniques in SPSS. Validity was tested and analysed for all the constructs. Checks were conducted to remove items that did not converge, that showed no loading, and items that had a loading less than 0.4 coefficient for the factors. The scales that passed the above analysis were tested for reliability on each construct at a time (Field, 2013). Once the reliability test was passed, a composite score was conducted on the factors, transforming them into variables. Pearson correlation coefficient was tested before the regression analysis to determine the level of associations between the variables and to measure the relationship between the independent and dependent variables (Cooper & Schindler, 2014; Urban, 2017).

The assumptions test was conducted before running a regression test to ensure that there were no statistical violations. Based on the data distribution, linear regression was conducted for the normal distribution of data (Cooper & Schindler, 2014; Field, 2013). Regression output was used to assess the impact of independent variables on the dependent variable. The covariance was used to test if there was a relationship between the independent variables (Urban, 2017). The results were then used to interpret the hypotheses, supported by the literature. The control variables, firm age, and size were tested to check the correlation within the variables.

3.8 Validity and reliability of research

The study adapted the research instruments that have been widely tested and found to be valid and reliable by previous researchers. The CEAI questionnaires were established to be fairly stable (Kuratko et al., 2014). The innovativeness questionnaire was also tested and found to be stable by Plambeck (2012) and Urban (2017). Validity describes the extent or degree at which an instrument is adequately and constantly measuring the items it intends to measure (Cooper & Schindler, 2014; Field, 2009). Reliability is described as the measurement of

accuracy, precision, and consistency (Cooper & Schindler, 2014). The main reason to test for reliability and validity was to reduce the measurement error (Field,2009). The instrument scales were tested for validity and reliability through SSPS. Exploratory factor analysis (EFA) checked the validity of the factor structure of the dimensions using Harris-Kaiser rotation, which observed the items loading factors exceeding 0.40 to be acceptable (Schwartz et al., 1993). This factor analysis was performed to check if the items correlate to the correct factors, or if the items were measuring the factor that they were supposed to measure.

3.8.1 External validity

External validity considers the study's ability to generalise across people or situations (Cooper & Schindler, 2014). In the context of this study, external validity considers the applicability of the research results to other provinces. The study focused on multi-sector, all the municipal districts, different age groups, SMEs owners and managers in Gauteng. This diverse spectrum assisted the researcher to obtain results that could be generalised across Gauteng. The external validity can be compromised by various errors from the respondents such as trying to impress the research and not being truthful. The external validity was maximised by conducting an anonymous survey to mitigate bias and maintain validity.

3.8.2 Internal validity

Internal reliability is described as the extent that the instrument measures what it is expected to measure (Cooper & Schindler, 2014). The researcher used the existing and tested instruments to maximise validity which are CEAI and the innovativeness instruments. The results from the internal validity tests were expected to be improved by the random selection of participants (Creswell, 2013). The same questionnaires were used across respondents within the same period (Field, 2013). The large population size and following the research plan was expected to improve internal validity (Creswell, 2013).

3.8.3 Reliability

Reliability demonstrates the extent or the degree at which an instrument is consistent, determining repeated measurements under different conditions to

provide the same outcome. Reliability is based on the consistency, accuracy, and precision of the results over time (Cooper & Schindler, 2014). The reliability of the instruments in the study is determined by achieving the same results. The reliability was tested. Table 5 below illustrate the summary of the results.

Table 5: Constructs and measures used in the study

Constructs	Literature sources	Items	Scales	Cronbach Alpha	Reliability
Management support	Ireland et al., 2009; Kuratko et al., 2015; Kuratko et al., 2014)	MS8, MS13, MS15, MS16, MS17,1MS18 & MS19	7-point Likert scale	0.907	Excellent
		MS1, MS2, MS3, MS4 & MS6	7-point Likert scale	0.886	Very good
Work discretion	(Hornsby et al., 2009; Hornsby et al., 2002; Kuratko et al., 2014)	WD6, WD7, WD8, WD9 & WD10	7-point Likert scale:	0.732	Acceptable
Rewards/Reinforcement	(Bayarçelik & Özşahin, 2014; Hornsby et al., 2009)	RR3, RR4 &RR5	7-point Likert scale	0.776	Acceptable
Time availability	(Hornsby et al., 2009; Kuratko et al., 2014)	TA3, TA3 & TA6	7-point Likert scale	0.761	Acceptable
		TA1, TA4 & TA5	7-point Likert scale	0.684	Questionable
Organisational boundaries	(Burgess, 2013; Hornsby et al., 2009; Kuratko et al., 2014)	OB3, OB5, OB6 & OB7	7-point Likert scale	0.852	Very good

Innovativeness	(Covin & Lumpkin, 2011; Kamaruddeen et al., 2010; Lumpkin & Dess, 1996)	INNO1, INNO2, INNO3, INNO4 & INNO5	7-point Likert scale	0.910	Excellent

The results showed a good average factor of 0.70 and above and were considered to be in line with the reliability conventions (Cronbach, 1951; Haynie & Shepherd, 2009). These results meant that the constructs were reliable and acceptable.

3.8.4 Ethics

Ethics was considered in the measuring instrument when engaging with the participants. The survey information was clearly explained to the participants before they conducted the survey. The participants made their own decision to participate or not participate in the survey and their decision was respected. The data was analysed as a group and did not reference a particular individual or firm. The participants' information is kept confidential and their responses were not misrepresented. The protocol number **WBS/BA548008/681** was obtained after approval of the research proposal from the Human Research Committee (non-medical), and the ethical certificate clearance was issued to the researcher to comply with the ethics conditions during the research period. The copy of the ethics clearance is found in Appendix C of this report.

3.9 Conclusion

The chapter discussed the details of the research methodology, design, the research paradigm, research design, data collection procedure, the population and sampling, research instrument, data analysis, validity, reliability of the instrument and ethical considerations. The statistical method used in the study was discussed. The next chapter discusses statistical analysis and presents the results analysed.

CHAPTER 4: PRESENTATION OF RESULTS

4.1 Introduction

The previous chapter discussed the research methodology of this study. This chapter presents the results analysed, based on the hypotheses formulated according to the literature discussed in chapter 2. The results present the demographic profile of the respondents, followed by the linear regression analysis results which answer the study hypotheses. The chapter concludes with a summary of the results. A total of 509 responses were received, however, 237 were eliminated from the sample because they were incomplete. Thus, a total of 272 responses were analysed. The remaining 272 cases did not have any missing values.

4.2 Demographic profile of respondents

4.2.1 Gender

The gender distribution of the sample is summarised in Figure 4. It can be noted that 68% of the sample were male while the other 32% were female.

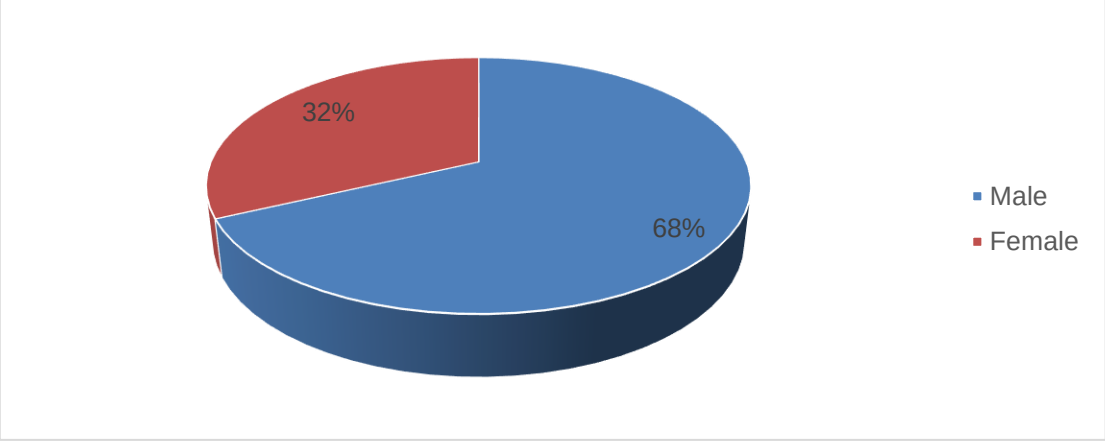

Figure 4: Respondent gender

4.2.2 Age

Figure 5 shows the age distribution of the respondents. A proportion of 13% of the respondents were 25-34 years, 40% were 35 – 44 years, 25% were 45 – 54 years while 22% were older than 55 years old.

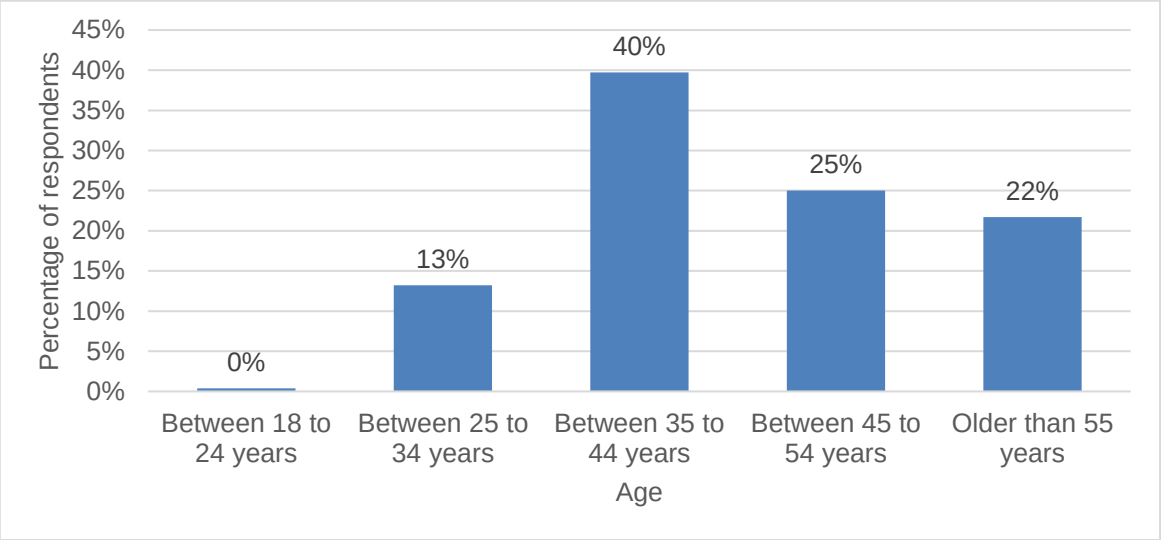

Figure 5: Respondent age

4.2.3 Race

Results illustrated in Figure 6 show that 69% of the sample were blacks, 23% white, 5% Indian and 2% were coloured. There was another 1% that indicated that they were of other races.

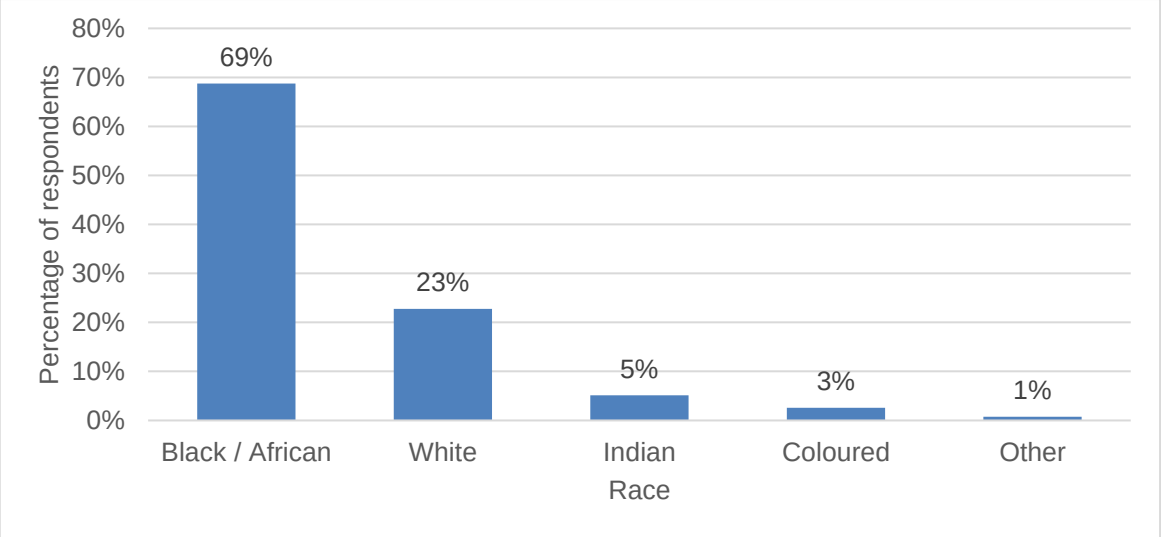

Figure 6: Respondent race

4.2.4 Level of education

The highest level of education attained was established and the results presented in Figure 7 indicates that only 8% had grade 12/Matriculation as their highest attained level of education and 4% had other. The rest had a Diploma / Post Matriculation certificate or higher.

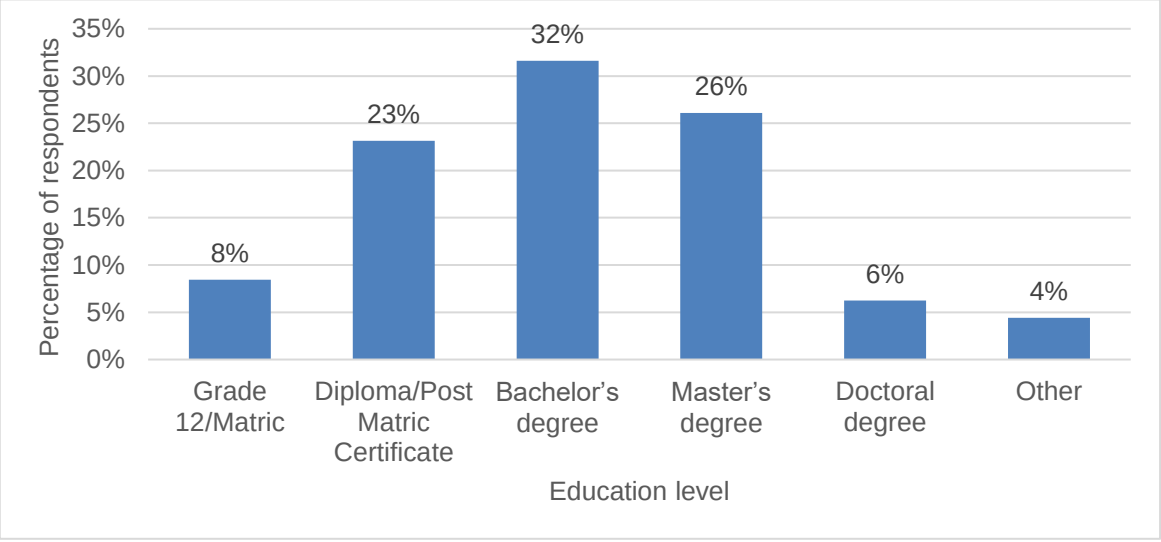

Figure 7: Level of education

4.2.5 Firm characteristics

The characteristics of the firms represented by the respondents in the sample are presented in Table 6. It can be noted that the respondents were mainly from the

Finance and business services industry (36%), the Construction industry (19%) and Transport, storage and communications (9%). The firms were mainly 10 years or less (64%), employed fewer than fifty (50) employees (89%) and firms that mainly had an annual turnover of below R50 Million (90%).

Table 6: Firm Characteristics

Variable	Option	Number	Percent
Industry classification	Finance and business services	98	36%
	Construction	53	19%
	Transport, storage and communications	25	9%
	Community, social and personal services	20	7%
	Electricity, gas and water	14	5%
	Catering, accommodation and other trade	14	5%
	Manufacturing	13	5%
	Retail, motor trade and repair services	12	4%
	Mining and quarrying	11	4%
	Agriculture	6	2%
	Wholesale	6	2%
The firm age	Between one (1) to five (5) years	97	36%

	Between five (5) to ten (10) years	77	28%
	Between eleven (11) to fifteen (15) years	35	13%
	Between sixteen (16) to twenty (20) years	20	7%
	More than twenty (20) years	43	16%
The firm size: Full-time employees	Fewer than fifty (50) employees	241	89%
	Between fifty (50) to (100) employees	10	4%
	Between one hundred and one (101) to two hundred (200) employees	4	1%
	Between two hundred and one (201) to two hundred fifty (250) employees	2	1%
	More than two hundred fifty (250) employees	15	6%
What is the total turnover of the company	Below R50 Million	244	90%
	Between R50 Million to R100 Million	7	3%
	Between R101 Million to R200 Million	4	1%
	Between R201 Million to 300 Million	4	1%
	More R300 Million	13	5%

4.3 Results

The results presented below were tested using several statistical techniques in SSPS. All the constructs were analysed and tested for validity. Items that did not converge, showed no loading and had a loading less than 0.4 coefficients were removed. The scales considered a minimum of three (3) items remaining under a factor. Reliability was tested on the final reduced scales to analyse each construct. Each scale displayed a specified Cronbach Alpha. The independent variable results are presented below.

4.3.1 Exploratory Factor analysis and Reliability analysis of the constructs

Exploratory factor analysis was conducted through SPSS to measure independent and dependent variables. Factor analysis was used to establish the correlation of the items to the correct factor and if the items were measuring the correct factor that they were supposed to measure. The principal axis factoring method was used as the method of extraction, together with Kaiser's criterion and a scree plot. The factor structure was improved through the use of an oblique rotation method known as Promax. A minimum coefficient of 0.4 was set as a cut-off for defining statistical correlation significance (Field, 2013).

4.3.1.1 Exploratory factor analysis

EFA was conducted to assess construct validity. Items were removed from the various constructs during iterations of EFA. The reasons for exclusion were low factor loading (< 0.4), low communality (<0.3), loading on more than one factor and having less than three items per factor. A list of items excluded from constructs after EFA computations are presented in Table 7.

Table 7: Items dropped from constructs

Items Excluded	**Reason for Exclusion**
INNO6: Our company has a widely held belief that innovation is an absolute necessity for the business's future.	Double loading
MS5: A promotion usually follows from the development of new and innovative ideas.	Factor Loading < 0.4
MS7: The ''doers on projects'' are allowed to make decisions without going through elaborate justification and approval procedures.	Factor Loading < 0.4
MS9: Many top managers have been known for their experience with the innovation process.	Factor Loading < 0.4
MS10: Money is often available to get new project ideas off the ground.	Less than 3 items in the construct
MS11: Individuals with successful innovative projects receive additional rewards and compensation beyond the standard reward system for their ideas and efforts.	Loading on more than 1 factor
MS12: There are several options within the organization for individuals to get financial support for their innovative projects and ideas.	Less than 3 items in the construct
WD1: Employees are given the freedom to make decisions without having to double-check all their decisions with someone else.	Factor Loading < 0.4
WD2: Harsh criticism and punishment result from mistakes made on the job.	Communality < 0.3

WD3: This organization provides employees with the chance to be creative and try their own methods of doing the job.	Factor Loading < 0.4
WD4: This organization provides employees with the freedom to use their own judgment.	Loading on more than 1 factor
WD5: This organization provides employees with the chance to do something that makes use of their abilities.	Factor Loading < 0.4
RR1: Management help employees get their work done by removing obstacles and roadblocks.	Factor Loading < 0.4
RR2: The rewards employees receive are dependent upon their innovation on the job.	Factor Loading < 0.4
RR6: There is a lot of challenges in the employees' job.	Communality < 0.3
OB1: In the past three months, employees have always followed standard operating procedures or practices to their major tasks.	Communality < 0.3
OB2: There are many written rules and procedures that exist for employees to do major tasks.	Loading on more than 1 factor
OB4: There is little uncertainty in the employees' job.	Communality < 0.3

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is presented in Table 8 as 0.895. It can be interpreted to mean that the sample was reasonable and adequate for computing factor analysis because it was greater than the minimum required value of at least 0.5. The Bartlett's Test of Sphericity was significant as indicated by a p-value of 0.000 which is less than 0.005 shown in Table 8. This

implied that the correlations among items within the constructs were strong enough to enable factor analysis (Galawe, 2017).

Table 8: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.895
Bartlett's Test of Sphericity	Approx. Chi-Square	6034.946
	df	630
	Sig.	.000

The Pattern matrix presented in Table 9 shows the composition of the retained eight factors. The results in Table 9 show that the retained items converged onto the factors that they had been hypothesised to with each construct being univariate, except for Management support and Time availability. Management support was split into two sub-constructs namely, (i) Management support for innovative ideas and (ii) Management support to execute ideas. Time availability was also split into two sub-constructs namely, (i) Time availability to handle the workload, and (ii) Time availability constraints on the job. Each item loaded highly onto their respective factors. Thus, there was validity in the constructs.

Table 9: Pattern Matrix

Construct/ Factor	Item	Factor							
		1	2	3	4	5	6	7	8
Management support for innovative ideas (MSII)	MS14: Individual risk-takers are often recognized for their willingness to champion new projects, whether eventually successful or not.	.994							
	MS13: People are often encouraged to take calculated risks with ideas around here.	.865							
	MS15: The term ‘‘risk-taker’’ is considered a positive attribute for people in this organization.	.780							
	MS18: There is a considerable desire among people in the organization for generating new ideas without regard for crossing departmental or functional boundaries.	.780							
	MS16: This organization supports many small and experimental projects, realizing that some will undoubtedly fail.	.714							

	MS17: An employee with a good idea is often given free time to develop that idea. .	.637							
	MS19: People are encouraged to talk to employees in other departments of this organization about ideas for new projects.	.536							
	MS8: Senior managers encourage innovators to bend rules and rigid procedures to keep promising ideas on track.	.456							
Innovativeness (INNO)	INNO1: Our company has identified the technique or methods that are highly innovative and totally new to the industry.		.908						
	INNO2: Our company has identified techniques or methods that are one of their kind in the industry.		.885						
	INNO4: Our company has identified techniques or methods that have unique features.		.848						
	INNO3: Our company has identified techniques or methods that relied on technology that has not been used in the industry before.		.744						
	INNO5: Our company place a strong emphasis on innovative products or services.		.730						

Work discretion (WD)	WD8: Employees almost always get to decide what to do on their job.			.999					
	WD9: Employees have much autonomy in their job and are left on their own to do their work.			.753					
	WD6: Employees have the freedom to decide what to do in their job.			.735					
	WD7: It is an employee's responsibility to decide how their job gets done.			.735					
	WD10: Employees seldom have to follow the same work methods or steps for doing their major tasks from day to day.			.442					
Organisational boundaries (OB)	OB7: Employees know the level of work performance that is expected from them in terms of amount, quality, and timelines of output.				.909				
	OB6: The employees' job description specifies the standards of performance on which their job is evaluated.				.847				
	OB3: Employees do not doubt what is expected from them on their job.				.647				

	OB5: During the past year, immediate supervisor discussed their employees work performance with them frequently.				.614				
Management support to execute ideas (MSEI)	MS4: Upper management is aware and very receptive to employees' ideas and suggestions.					.875			
	MS6: Those employees who come up with innovative ideas on their own often receive management encouragement for their activities.					.779			
	MS2: Our organization is quick to use improved work methods that are developed by workers.					.708			
	MS3: In our organization, developing one's own ideas is encouraged for the improvement of the corporation.					.623			
	MS1: Our organization is quick to use improved work methods.					.620			
Time availability to handle the	TA3: Employees have just the right amount of time and workload to do everything well.						.784		
	TA2: Employees always seem to have plenty of time to get everything done.						.748		

workload (TAHW)	TA6: Employees and their co-workers always find time for long-term problem-solving.						.434		
Rewards / Reinforcement (RR)	RR4: Employee supervisor gives employees special recognition if their work performance is especially good.							.916	
	RR5: Employee manager tells his/her boss if employee work was outstanding.							.595	
	RR3: Employee supervisors will increase employee job responsibilities if they are performing well in their job.							.566	
Time availability constraints on the job (TACJ)	TA5: Employees feel that they are always working with time constraints on their job.								.741
	TA4: Employees' job is structured so that they have very little time to think about wider organizational problems.								.652
	TA1: During the past three months, employee workload kept them from spending time on developing new ideas.								.556
	Extraction Method: Principal Axis Factoring.								

	Rotation Method: Promax with Kaiser Normalization.
	a. Rotation converged in 7 iterations.

Table 10 shows the total amount of variance explained by the retained factors. The results show that eight factors were retained with Eigenvalues greater than one. The retained eight factors explained 69.599% of the variance in the 36 initial items retained in the model. A cumulative variance of 50% is determined as the acceptable level and the variance of the results is greater, which means it has been met and explained by the factors.

Table 10: Total Variance Explained

Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	11.333	31.479	31.479	10.964	30.456	30.456	8.672
2	3.034	8.427	39.906	2.719	7.553	38.009	5.513
3	2.749	7.635	47.542	2.374	6.594	44.603	5.964
4	2.371	6.586	54.128	1.987	5.519	50.122	6.437
5	1.782	4.950	59.077	1.368	3.801	53.922	7.456
6	1.500	4.166	63.244	1.103	3.064	56.987	3.444
7	1.193	3.314	66.558	.808	2.245	59.232	6.164
8	1.095	3.041	69.599	.738	2.050	61.282	1.704

9	.804	2.232	71.831				
10	.742	2.062	73.893				
11	.678	1.882	75.775				
12	.656	1.821	77.596				
13	.638	1.771	79.367				
14	.612	1.701	81.068				
15	.555	1.543	82.610				
16	.529	1.470	84.080				
17	.504	1.401	85.482				
18	.452	1.256	86.738				
19	.444	1.233	87.971				
20	.414	1.149	89.120				
21	.395	1.098	90.218				
22	.361	1.004	91.222				
23	.350	.973	92.195				
24	.308	.856	93.051				

25	.290	.805	93.857				
26	.272	.755	94.612				
27	.257	.714	95.325				
28	.251	.697	96.023				
29	.221	.614	96.637				
30	.210	.583	97.220				
31	.207	.574	97.794				
32	.188	.523	98.316				
33	.176	.490	98.807				
34	.161	.448	99.254				
35	.155	.431	99.685				
36	.113	.315	100.000				
Extraction Method: Principal Axis Factoring.							
a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.							

The scree plot presented in Figure 8 indicates that the first eight factors explain most of the variation. This is shown by the line graph being steep through the first eight factors and flattening out after the eight constructs. This confirms that eight factors were extracted.

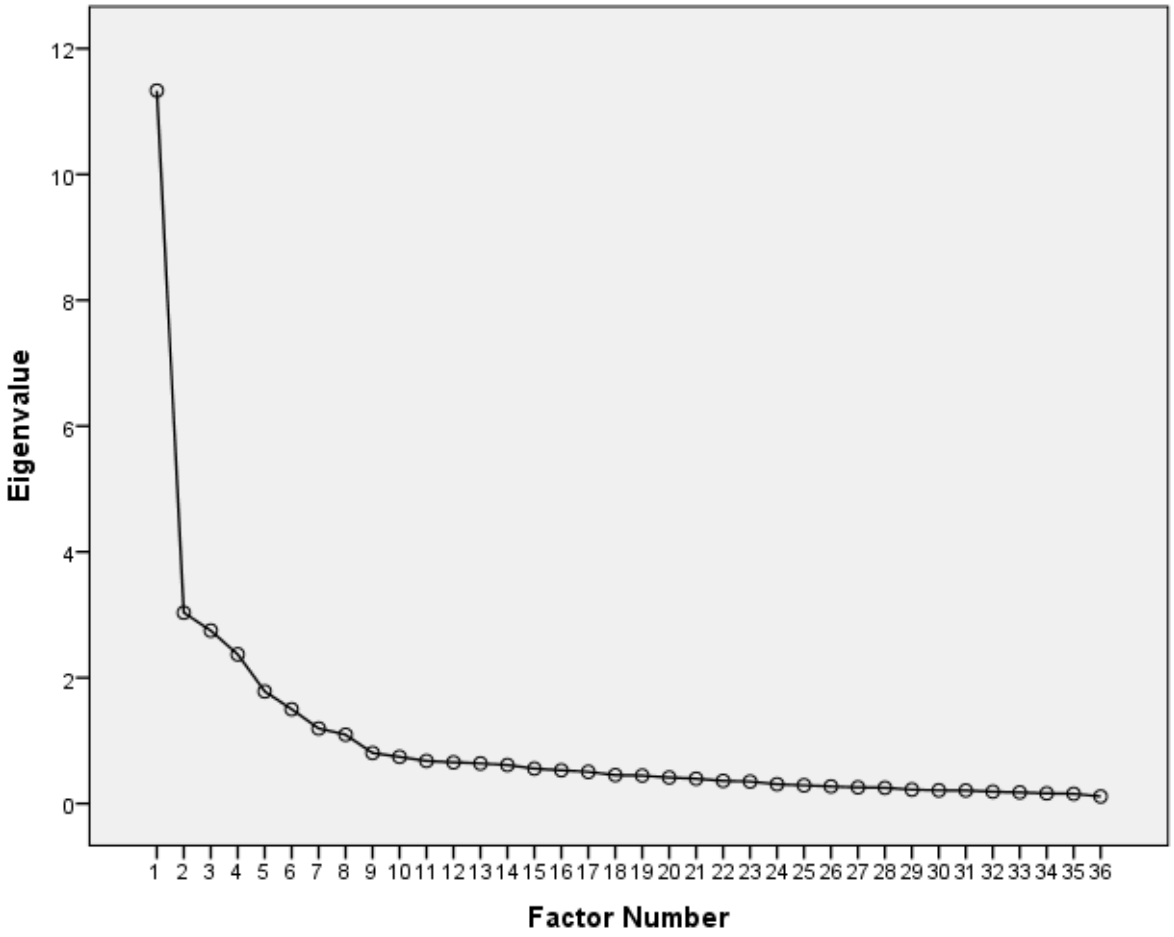

Figure 8: Scree plot

4.3.2 Reliability analysis

Reliability tests were conducted on each construct that converged on the pattern matrix. The reliability co-efficient Cronbach's alpha was used to check for internal consistency. Cronbach's alpha was computed for each construct to assess the reliability of the scale for the constructs. The results are presented in Table 11.

Table 11: Reliability level

Construct/ Sub-construct	Number of items	Cronbach's Alpha	Reliability Level
Management support for innovative ideas (MSII)	8	.907	Excellent
Innovativeness (INNO)	5	.910	Excellent
Management support to execute ideas (MSEI)	5	.886	Very good
Organisational boundaries (OB)	4	.852	Very good
Rewards / Reinforcement (RR)	3	.776	Acceptable
Time availability to handle the workload (TAHW)	3	.761	Acceptable
Work discretion (WD)	5	.732	Acceptable
Time availability constraints on the job (TACJ)	3	.684	Questionable

Reliability results in Table 11 showed that there was an excellent reliability for Management support for innovative ideas (8 items, α = 0.907), and Innovativeness (5 items, α =0.910) as the Cronbach's Alpha values were greater than 0.9. There was very good reliability for Management support to execute ideas (5 items, α = 0.886), and Organisational boundaries (4 items, α = 0.852) with Cronbach's alpha values greater than 0.8. Rewards / Reinforcement (3 items, α = 0.776), Time availability to handle the workload (3 items, α = 0.761), and Work discretion (5 items, α = 0.732) had acceptable reliability. Time

availability constraints on the job (3 items, α = 0.684) had a questionable reliability level as the Cronbach's alpha was less than 0.7.

4.3.3 Summary of the factors relative to the hypotheses.

The pattern matrix established and indicated a factor structure of seven (7) factors independent variables and one (1) factor dependent variable. Below table 12 highlight the results of the factors relative to the hypotheses whether they were supported or not supported.

Table 12: Factors and the hypotheses

Organisational internal factors (IVs – F1, F3, F4, F5, F6 & F7) and SMEs' innovativeness (DV – F2)			
Factors (IVs & DV)	Hypothesis		Supported
F1: Management support for innovative ideas (MSII)	H1a_1	There is a positive relationship between Management support for innovative ideas and SMEs' innovativeness.	Yes
F3: Work discretion (WD)	H1b	There is a positive relationship between the organisational antecedent of work discretion/autonomy and SMEs' innovativeness.	No
F4: Organisational boundaries (OB)	H1e	There is a positive relationship between the organisational antecedent of organisational boundaries and SMEs' innovativeness.	No
F5: Management support to execute ideas (MSEI)	H1a_2	There is a positive relationship between Management support to execute ideas and SMEs' innovativeness.	Yes
F6: Time availability to handle the workload (TAHW)	H1d_1	There is a positive relationship between the organisational antecedent of Time availability to handle the workload and SMEs' innovativeness.	Yes

F7: Rewards / Reinforcement (RR)	H1c	There is a positive relationship between the organisational antecedent of rewards/reinforcement and SMEs' innovativeness.	Yes
F8: Time availability constraints on the job (TACJ)	H1d_2	There is a positive relationship between the organisational antecedent of time availability constraints on the job and SMEs' innovativeness.	Yes

4.3.4 Composite score

A composite score was computed for each construct by calculating the average of items within each construct to form a new variable for the construct. Although the reliability level for Time availability constraints on the job was questionable, the value of 0.684 was very close to the acceptable value and was above 0.5, a point below which the reliability level becomes unacceptable (George & Mallery, 2003). Thus, a summated scale was also computed for the Time availability constraints on the job construct.

4.3.5 Correlation Analysis

Descriptive statistics and correlation analysis were conducted. The type of correlation depends on whether the variables are normally distributed or not. Q-Q Plots were plotted to assess whether the composite variables for the constructs followed or at least approximated the normal distribution. The plots are shown in Figure 9.

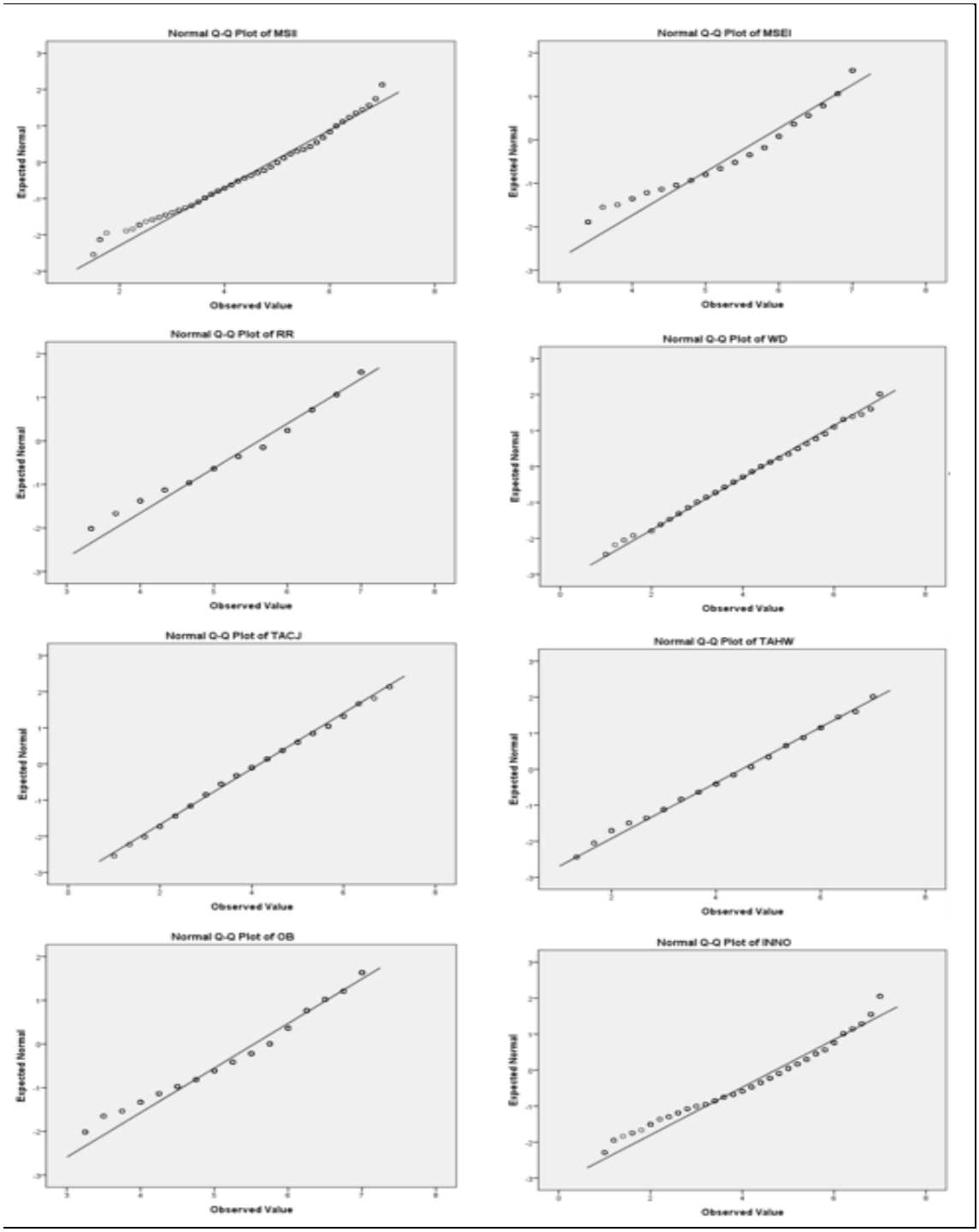

Figure 9: Q-Q Plots for all constructs

The Q-Q plots in Figure 9 showed that all the variables approximated the normal distribution for all variables as the dots were very close to the solid diagonal line. This implies that the Pearson's correlation was conducted as the data was normally distributed. The descriptive statistics and Pearson's correlation results are presented in Table 13.

Table 13: Descriptive statistics and Pearson's Correlation

Correlations	Descriptive Statistics		Pearson's Correlation							
Variables	M	SD	1.	2.	3.	4.	5.	6.	7.	8.
1.Management support for innovative ideas	4.89	1.26	1							
2.Management support to execute ideas	5.73	1.00	.573**	1						
3.Work discretion	4.43	1.37	.502**	.360**	1					
4.Rewards Reinforcement	5.61	0.97	.530**	.539**	.459**	1				
5.Time availability to handle the workload	4.49	1.29	.323**	.286**	.356**	.386**	1			
6.Time availability constraints on the job	4.17	1.30	.155*	-.053	.183**	.123*	.056	1		
7.Organisational boundaries	5.54	0.98	.423**	.526**	.262**	.498**	.511**	.078	1	
8.Innovativeness	4.72	1.51	.367**	.378**	.199**	.273**	.250**	.157**	.249**	1

M=mean, SD = Standard Deviation, * = p-value < 0.05, **= P-value < 0.01

The descriptive statistics shows that Management support to execute ideas (mean = 5.73) was the highest rated construct, followed by Rewards Reinforcement (mean = 5.61) and Organisational boundaries (mean = 5.54). Time availability constraints on the job (mean = 4.17) was the lowest rated construct).

The correlation results show that Innovativeness was significantly positively correlated to each of Management support for innovative idea (r = 0.367, p-value < 0.01), Management support to execute ideas (r = 0.378, p-value < 0.01), Work discretion (r = 0.199, p-value < 0.01), Rewards Reinforcement (r = 0.273, p-value < 0.01), Time availability to handle the workload (r = 0.250, p-value < 0.01), Time availability constraints on the job (r = 0.157, p-value < 0.01), Organisational boundaries (r = 0.249, p-value < 0.01).

4.4 Hypothesis testing

Hierarchical Multiple Regression analysis with Innovativeness as the dependent variable was conducted to assess the hypotheses. The independent variables were Management support for an innovative idea, Management support to execute ideas, Work discretion, Rewards Reinforcement, Time availability to handle the workload, Time availability constraints on the job, and Organisational boundaries while firm age and firm size were added as control variables.

4.4.1 Testing of Regression assumptions

The assumption tests were tested before regression which included normality and outlier tests. This was conducted to avoid violating the assumptions for regression analysis. Linear regression was conducted to describe the relationships of the variables. A straight-line equation was used to see the direction or strength of the relationships. The process of the testing was performed using the statistical model fit, estimate, collinearity, Durbin Watson, confidence intervals. Multiple independent variables were loaded against one dependent variable (Field, 2013). The output for the regression consists of model summary, ANOVA, coefficients, and histogram.

4.4.2 Testing for Outliers

One of the regression assumptions is that there are no outliers that negatively influence the quality of the model. To assess this assumption, a box plot was plotted for each variable and outliers are shown by values that lie outside the whiskers of the box plots. There were a few outliers on the variables of Management support for an innovative idea, Management support to execute ideas, Rewards Reinforcement, Time availability to handle the workload,

Organisational boundaries. These were on the lower end of the scale. These were replaced by the next lowest values that were not outliers. Figure 10 shows boxplots before and after removing outliers. The variables after excluding outliers were used for regression analysis. Thus, the research made sure that no outliers' assumption was met.

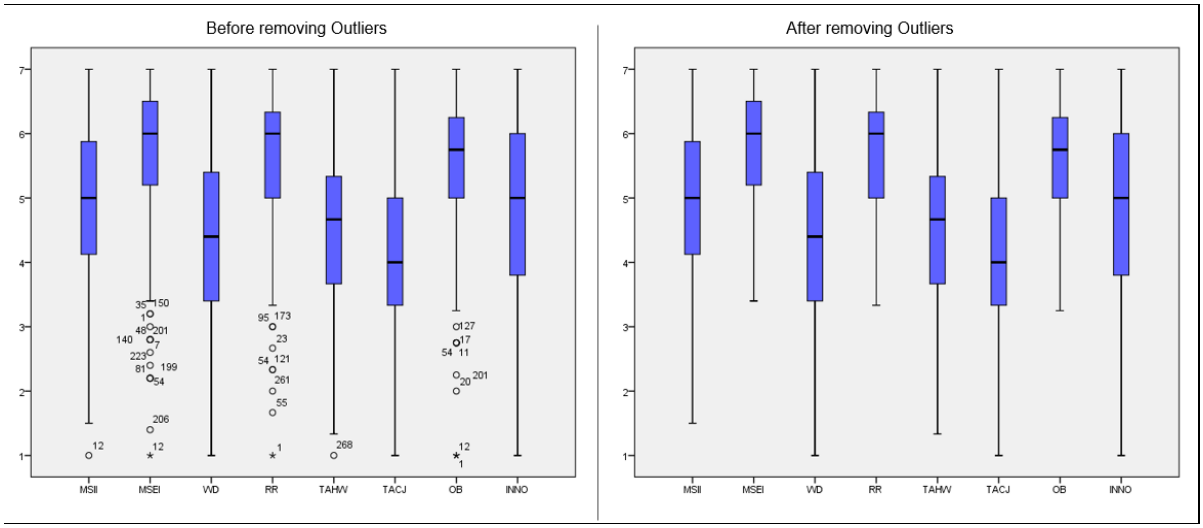

Figure 10: Boxplot before and after removing outliers

4.4.3 Test for Linearity

The second assumption is that there is a linear relationship between the dependent variable and each of the independent variables. Scatter plots were plotted for innovation against the other seven constructs; the results are shown in Figure 11. It can be noted from the trend line that a linear regression exists between the dependent variable and each of the independent variable. This means that the linearity assumption was also met.

Figure 11: Scatter plots against the independent variables

4.4.4 Test for Normality

The third assumption is that the residuals follow a normal distribution. A histogram was plotted to assess this assumption. It can be noted in Figure 12 that most of the bars fell below the normal curve, which suggests that the normality of residuals assumption was met.

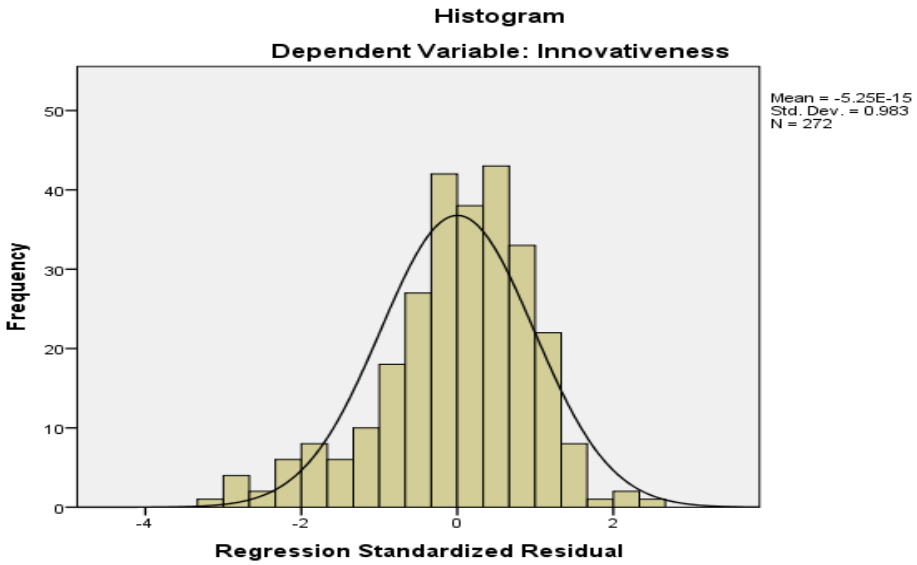

Figure 12: Histogram of regression residuals

4.4.5 Test for no Multicollinearity

The fourth assumption is that the independent variables are strongly related among themselves to the extent of negatively impacting on the regression model. The variance inflation factors (VIF) shown in Table 14 were all less than 10, which implies that there was no problem with multicollinearity.

Table 14: Test for Multicollinearity

	Collinearity Statistics	
	Tolerance	VIF
The firm age	.744	1.344

The firm size: Full-time employees	.724	1.382
Management support for innovative ideas	.520	1.923
Management support to execute ideas	.500	2.000
Work discretion	.654	1.530
Rewards Reinforcement	.544	1.840
Time availability to handle the workload	.656	1.525
Time availability constraints on the job	.906	1.104
Organisational boundaries	.530	1.888

4.4.6 Test for no Homoscedasticity

The fifth assumption is the assumption of homoscedasticity. This assumption states that the error terms or residuals are randomly spread around a mean of zero with no noticeable systematic pattern. A scatter plot of the regression standardised residuals was plotted against the standardised predicted variables. The results shown in Figure 13 indicate that there were no systematic patterns observed and that the residuals were randomly scattered around zero. This indicates that the homoscedasticity assumption was met.

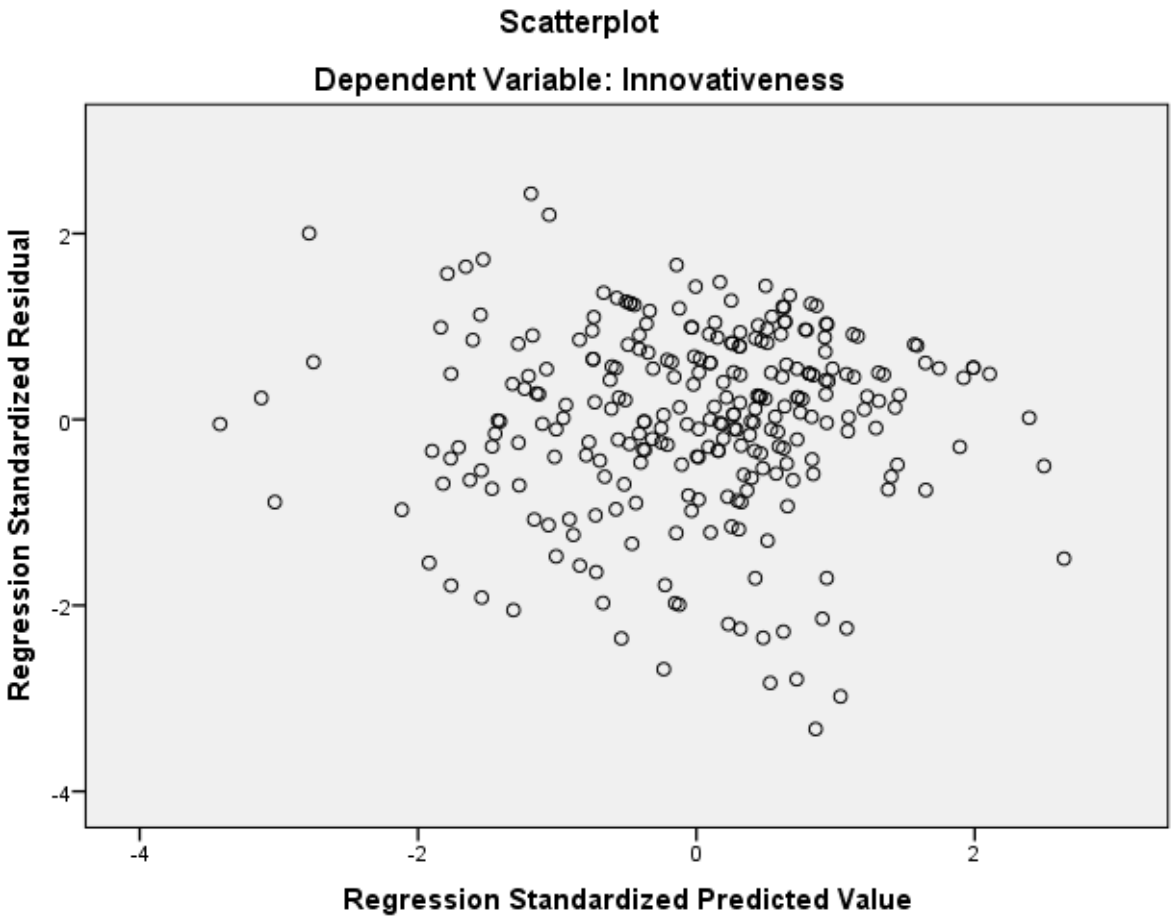

Figure 13: Scatter plot of standardised residuals against standardised innovativeness scores

4.4.7 Test for Independent errors

The last assumption is that the error terms are independent. The Durbin-Watson statistic was 1.928 which was very close to 2, as shown in Table 14. This indicates that the assumption for the independence of error terms was also met.

All the regression assumptions were met, thus the results that follow are based on a valid model where all assumptions were met.

4.4.8 Regression Results

The regression model summary is shown in Table 15. The results show that the control variables, firm size, and firm age account for 1.4% of the variation in the innovativeness of an SME as shown by an R-square of 0.014 for model one with these two variables only. The independent variables Organisational boundaries,

Time availability constraints on the job, Work discretion, Time availability to handle the workload, Management support for an innovative idea, Rewards Reinforcement, Management support to execute ideas account for an additional 25% in the variation of innovativeness as indicated by an R Square Change of 0.250 on model 2 that includes the independent variables. All control variables and independent variables account for 26.4% in favouritism in innovativeness.

Table 15: Model Summary

Model Summary[c]										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.117[a]	.014	.006	1.50524	.014	1.852	2	269	.159	
2	.514[b]	.264	.239	1.31742	.250	12.738	7	262	.000	1.928
a. Predictors: (Constant), The firm size: Full-time employees, The firm age										
b. Predictors: (Constant), The firm size: Full-time employees, firm age, Organisational boundaries, Time availability constraints on the job, Work discretion, Time availability to handle the workload, Management support for innovative ideas, Rewards Reinforcement, Management support to execute ideas										
c. Dependent Variable: Innovativeness										

4.4.9 Anova

Table 16 shows that the control variables on their own are not significant in predicting innovativeness as shown by a p-value of 0.159 for model 1. For model 2 on the other hand the p-value for the model F (9,262) = 10.445 was 0.000, which is less than 0.05. This implies that the model was valid at a 5% significance

level. This implies that all the independent variables, together with the control variables, are significant in predicting innovativeness.

Table 16: ANOVA

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	8.391	2	4.195	1.852	.159[b]
	Residual	609.485	269	2.266		
	Total	617.876	271			
2	Regression	163.151	9	18.128	10.445	.000[c]
	Residual	454.725	262	1.736		
	Total	617.876	271			
a. Dependent Variable: Innovativeness						
b. Predictors: (Constant), The firm size: Full-time employees, The firm age						
c. Predictors: (Constant), The firm size: Full-time employees, The firm age, Organisational boundaries, Time availability constraints on the job, Work discretion, Time availability to handle the workload, Management support for innovative ideas, Rewards Reinforcement, Management support to execute ideas						

4.4.10 Testing for Coefficients

The contribution of each variable to the prediction of innovativeness is summarised in the coefficients table presented in Table 17. The results shown for model 2, which is the final model shows that The firm size (β = 0.188, t-value

= 3.010, p-value = 0.003), Management support for innovative ideas (β = 0.224, t-value = 2.054, p-value = 0.002), Management support to execute ideas (β = 0.338, t-value = 4.509, p-value = 0.000), Time availability to handle the workload (β = 0.171, t-value = 2.616, p-value = 0.009), Time availability constraints on the job (β = 0.136, t-value = 2.434, p-value = 0.016), were significant in predicting innovativeness.

Table 17: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.471	.187		23.908	.000		
	The firm age	.010	.072	.010	.141	.888	.780	1.283
	The firm size: Full-time employees	.173	.106	.112	1.629	.105	.780	1.283
2	(Constant)	-.519	.650		-.798	.426		
	The firm age	.091	.065	.086	1.407	.161	.744	1.344
	The firm size: Full-time employees	.290	.096	.188	3.010	.003	.724	1.382
	Management support for innovative ideas	.269	.088	.224	3.054	.002	.520	1.923

	Management support to execute ideas	.512	.113	.338	4.509	.000	.500	2.000
	Work discretion	-.070	.072	-.063	-.968	.334	.654	1.530
	Rewards Reinforcement	.008	.112	.005	.072	.943	.544	1.840
	Time availability to handle the workload	.200	.076	.171	2.616	.009	.656	1.525
	Time availability constraints on the job	.158	.065	.136	2.434	.016	.906	1.104
	Organisational boundaries	-.162	.112	-.105	-1.444	.150	.530	1.888

The model was Innovativeness = -0.519 + 0.09 Firm age + 0.290 Firm Size +0.269 MSII + 0.512 MSEI - 0.070 WD + 0.008 RR + 0.200 TAHW + 0.158 TACJ -0.162 OB.

4.5 Results pertaining to Hypotheses

4.5.1 Results pertaining to hypothesis 1a (H1a): There is a positive relationship between the organisational antecedent of management support and SMEs' innovativeness.

H0: There is no relationship between organisational antecedent of management support and SMEs' innovativeness.

Management support was split into two sub-constructs and thus the alternative hypothesis was split into two as well.

4.5.1.1 H1a_1: There is a positive relationship between Management support for innovative ideas and SMEs' innovativeness.

The results presented in Table 17 show that Management support for innovative ideas (β = 0.224, t-value = 2.054, p-value = 0.002) was positively and significantly related to SMEs' innovativeness. The relationship was positive because the coefficient for Management support for innovative ideas (β = 0.224) was greater

than zero. The relationship was significant because the p-value was less than 0.05. This indicates that the null hypothesis was rejected in favour of the alternative hypothesis. Thus, it is concluded that there is sufficient evidence at a 5% significance level to suggest that there is a positive relationship between the organisational antecedent of management support for innovative ideas and SMEs' innovativeness.

The second component of hypothesis H1a is presented below.

4.5.1.2 H1a_2: There is a positive relationship between Management support to execute ideas and SMEs' innovativeness.

The results presented in Table 17 show that Management support to execute ideas (β = 0.338, t-value = 4.509, p-value = 0.000) was positively and significantly related to SMEs' innovativeness. The relationship was positive because the coefficient for Management support to execute ideas (β = 0.338) was greater than zero. The relationship was significant because the p-value was less than 0.05. This indicates that the null hypothesis was rejected in favour of the alternative hypothesis. Thus, it is concluded that there is sufficient evidence at a 5% significance level to suggest that there is a positive relationship between the organisational antecedent of Management support to execute ideas and SMEs' innovativeness.

4.5.2 Results pertaining to hypothesis 1b (H1b): There is a positive relationship between the organisational antecedent of work discretion/autonomy and SMEs' innovativeness.

H0: There is no relationship between the organisational antecedent of work discretion/autonomy and SMEs' innovativeness

H1b: There is a positive relationship between the organisational antecedent of work discretion/autonomy and SMEs' innovativeness.

The results presented in Table 17 show that Work discretion (β = -0.063, t-value = -0.968, p-value = 0.334) was negatively related to SMEs' innovativeness but the relationship was not significant. The relationship was negative because the coefficient for Work discretion (β = -0.063) was less than zero. The relationship was non-significant because the p-value was greater than 0.05 (p-value = 0.334).

This indicates that the null hypothesis could not be rejected at a 5% significance level. Thus, it is concluded that there is not sufficient evidence at a 5% significance level to reject the null hypothesis and it is concluded that there is no significant relationship between the organisational antecedent of work discretion/autonomy and SMEs' innovativeness.

4.5.3 Results pertaining to hypothesis 1c (H1c): There is a positive relationship between the organisational antecedent of rewards/reinforcement and SMEs' innovativeness

H0: There is no relationship between the organisational antecedent of rewards/reinforcement and SMEs' innovativeness.

H1c: There is a positive relationship between the organisational antecedent of rewards/reinforcement and SMEs' innovativeness.

The results presented in Table 17 show that rewards/reinforcement (β = 0.005, t-value = 0.072, p-value = 0.943) was positively related to SMEs' innovativeness but the relationship was not significant. The relationship was positive because the coefficient for rewards/reinforcement (β = 0.005) was greater than zero. The relationship was non-significant because the p-value was greater than 0.05. This indicates that the null hypothesis could not be rejected at a 5% significance level. Thus, it is concluded that although the hypothesis that there is a positive relationship is supported, the relationship was not significant. This implies that there is not sufficient evidence at a 5% significance level to reject the null hypothesis and it is concluded that there is no significant relationship between the organisational antecedent of rewards/reinforcement and SMEs' innovativeness.

4.5.4 Results pertaining to hypothesis 1d (H1d): There is a positive relationship between the organisational antecedent of time availability and SMEs' innovativeness

H0: There is no relationship between the organisational antecedent of time availability and SMEs' innovativeness

Time availability was split into two sub-constructs and thus the alternative hypothesis was split into two as well.

4.5.4.1 H1d_1: There is a positive relationship between the organisational antecedent of Time availability to handle the workload and SMEs' innovativeness.

The results presented in Table 17 show that Time availability to handle the workload (β = 0.171, t-value = 2.616, p-value = 0.009) was positively and significantly related to SMEs' innovativeness. The relationship was positive because the coefficient for Time availability to handle the workload (β = 0.171) was greater than zero. The relationship was significant because the p-value was less than 0.05 (p-value = 0.009). This indicates that the null hypothesis was rejected in favour of the alternative hypothesis. Thus, it is concluded that there is sufficient evidence at 5% significance level to suggest that there is a positive relationship between the organisational antecedent of Time availability to handle the workload and SMEs' innovativeness.

The second component of hypothesis H1d is presented below.

4.5.4.2 H1d_2: There is a positive relationship between the organisational antecedent of time availability constraints on the job and SME's innovativeness.

The results presented in Table 17 show that time availability constraints on the job (β = 0.136, t-value = 2.434, p-value = 0.016) was positively and significantly related to SMEs' innovativeness. The relationship was positive because the coefficient for time availability constraints on the job (β = 0.136) was greater than zero. The relationship was significant because the p-value was less than 0.05. This indicates that the null hypothesis was rejected in favour of the alternative hypothesis. Thus, it is concluded that there is sufficient evidence at a 5% significance level to suggest that there is a positive relationship between the organisational antecedent of time availability constraints on the job and SMEs' innovativeness.

4.5.5 Results pertaining to hypothesis 1e (H1e): There is a positive relationship between the organisational antecedent of organisational boundaries and SMEs' innovativeness

H0: There is no relationship between the organisational antecedent of organisational boundaries and SMEs' innovativeness.

H1e: There is a positive relationship between the organisational antecedent of organisational boundaries and SMEs' innovativeness.

The results presented in Table 17 show that organisational boundaries (β = -0.105, t-value = -1.444, p-value = 0.150) was negatively related to SMEs' innovativeness but the relationship was not significant. The relationship was negative because the coefficient for organisational boundaries (β = -0.105) was less than zero. The relationship was non-significant because the p-value was greater than 0.05 (p-value = 0.150). This indicates that the null hypothesis could not be rejected at a 5% significance level. Thus, it is concluded that there is not sufficient evidence at a 5% significance level to reject the null hypothesis and it is concluded that there is no significant relationship between the organisational antecedent of organisational boundaries and SMEs' innovativeness.

4.6 Summary of the results

This chapter presented the results analysed through SSPS using the research methodology discussed in chapter 3. The methodology followed presented the demographics of the sample, data analysis and considered the model measurements. The structural results of the model were presented taking cognisance of the hypotheses model outlined in Chapter 3. The results summary of the hypotheses is presented in Table 18 below.

Table 18: Summary of hypotheses

Hypothesis		Supported	Significant / Insignificant
H1a_1	There is a positive relationship between Management support for innovative ideas and SMEs' innovativeness.	Supported	Significant

H1a_2	There is a positive relationship between Management support to execute ideas and SMEs' innovativeness	Supported	Significant
H1b	There is a positive relationship between the organisational antecedent of work discretion/autonomy and SMEs' innovativeness.	Not Supported	Not significant
H1c	There is a positive relationship between the organisational antecedent of rewards/reinforcement and SMEs' innovativeness	Supported	Not significant
H1d_1	There is a positive relationship between the organisational antecedent of Time availability to handle the workload and SMEs' innovativeness	Supported	Significant
H1d_2	There is a positive relationship between the organisational antecedent of time availability constraints on the job and SMEs' innovativeness	Supported	Significant
H1e	There is a positive relationship between the organisational antecedent of organisational boundaries and SMEs' innovativeness	Not Supported	Not significant

4.7 Conclusion

This chapter provided an overview of the study results. The demographic profile of the respondents, EFA, reliability, hypotheses results were presented to answer the hypotheses formulated in chapter 2 from the literature. The significance of the relationship between the independent, dependent, and control variables was discussed. The hypotheses outcomes are indicated in Table 18. The next chapter discusses the details of the results and the findings are linked to literature.

CHAPTER 5: DISCUSSION OF THE RESULTS

5.1 Introduction

The role of corporate entrepreneurship and its influence on SMEs has been researched in an African context (Hughes & Mustafa, 2017). However, this research undertook a different approach to investigate the level of corporate entrepreneurship focusing on organisational internal factors that influence SMEs' innovativeness in Gauteng. The organisational internal factors and SMEs' innovativeness were observed from a multi-sector perspective with the focus on a South African context.

In this chapter, the impact of the results presented in the previous chapter is presented and interpreted concerning literature discussed in chapter 2. The demographic profile of the respondents concerning gender, age, race, level of education and firm characteristics are discussed. The discussions focus on the hypotheses testing of the five variables.

5.2 Demographic profile and firm characteristics of respondents

The demographic profile of the respondents consisted of gender, age, race, level of education and firm characteristics. A sample of 272 respondents was used to analyse the data.

5.2.1 Gender

The results indicated a gender representation of the respondents comprising of 32% female and 68% male. The Real Economy Bulletin report which provided a quarterly review on the state of small business in South Africa presented findings that indicated way less than half of the female entrepreneurs as compared to male entrepreneurs (Levin, Makgetla, Philip, & Fotoyi, 2019). Based on the sample, the results indicated close to half of the female entrepreneurs which is a slight increase of female as compared to male entrepreneurs. The results are in line with the Global Entrepreneurship Monitoring survey which highlighted South Africa as one of the economies among the seven (7) economies which showed an improvement in early-stage female entrepreneurs compared to men in starting their own business (Bosma et al., 2020). The results demonstrated interest from

females to take on entrepreneurship positions and this is seen to be contributing to the economy even though there is still a slight lag in most countries (Bosma et al., 2020). This increase in female entrepreneurs could have been driven by the uncertain global environmental conditions and increased unemployment hence the need for female entrepreneurs to seek opportunities (Herrington & Kew, 2018). This picture shows the need for government to support policies that include females to participate in the economic development in order to revise the historical economic imbalance in South Africa. The bigger picture may be policies supporting SMEs. It has also been found that other African countries, such as Mozambique, are short on policies supporting SMEs (Urban, Townsend & Bowen, 2020).

5.2.2 Age

The results indicated the highest responses from the age group 35-44 years at 40%. The second highest responses comprise age group 45-54 years at 25%, third highest indicate age group older than 55 years at 22%, fourth highest consist of age group 25-34 years at 13% and lastly age group 18-24 at 0%. The age group 35-44 years and age group 45-54 years percentage indicates a high total early-stage entrepreneurial activity, and it is consistent with findings from the Global Entrepreneurship Monitoring (GEM) report on entrepreneurship and the South African 2017/2018 GEM report (Bosma et al., 2020; Herrington & Kew, 2018).

The results of the age group of 18-25 years at 0% raised a concern. According to Rachelson (2018), in the Seed report, there was a decline in youth entrepreneurs as compared to previous survey reports. This consistent decline of youth entrepreneurs indicates that there should be more focus on the youth to engage in programmes that develop and promote entrepreneurship, especially in countries that have high youth unemployment. The GEM report emphasised various policies initiatives from countries such as Canada, India, and Madagascar that support the youth to start a new business. These countries have supported the youth because of their ability to take risks, less responsibilities, awareness of new technologies, ideas that can contribute to the new businesses (Bosma et al., 2020).

5.2.3 Race

The respondents were requested to indicate their race group. The study context was to view the SMEs' innovativeness distribution in terms of race group within firms operating in Gauteng. The race results indicated most respondents as blacks at 69%, followed by white at 23%, then Indians at 5%, coloured at 3% and other at 1%. Previous years have indicated the dominance of white entrepreneurs in small businesses (Levin et al, 2019). However, this outlook has changed in recent years presenting an increase in black entrepreneurs and a decline in white entrepreneurs.

In the other groups, the status does not have significant changes and these results are consistent with the population demographics (Herrington & Kew, 2018; Levin et al, 2019). The presented results are in line with this outlook, presenting an increase in black entrepreneurs and a decrease in white entrepreneurs. The higher than a proportionate representation of the white race could be influenced by the government policies (Broad-Based Black Economic Empowerment (B-BBEE) Act No. 53 of 2003, Preferential Procurement Policy Framework Act No.5 of 2000 (PPPFA) etc.) driven to close the gap between the previously excluded group and the white group.

5.2.4 Level of education

The majority of respondents indicated the highest level of education as a Bachelor degree at 32%, Master degree at 26% and Diploma or post matriculation certificate at 23%. The GEM report findings in previous research indicated an increase of educated entrepreneurs (Kelley, Singer & Herrington, 2016; Herrington & Kew, 2018). The Real Economy Bulletin report also presented an increase of the level of education of entrepreneurs in the formal businesses as opposed to informal businesses (Levin et al, 2019). These results indicate even a higher percentage of entrepreneurs with higher qualifications. These results display education as an integral part of human capital which could influence opportunity recognition, innovation, and entrepreneurial alertness to grow the business (Urban, 2019). The results are also consistent with the previous research that that showed educated entrepreneurs peruse opportunities and achieve entrepreneurial success while in lower income countries less

educated entrepreneurs are driven by necessity (Bosma & Kelley, 2019; Herrington & Kew, 2018; Venter et al., 2015).

5.2.5 Firm characteristics

All the firms confirmed to be located in Gauteng Province. The majority of the respondents specified their classified sector as Finance and business services industry at 36% followed by the Construction industry at 19%.

The results revealed a high percentage of 36% for the firm age between one and five years and this representation is consistent with the GEM report which indicates high early business and business sustainability remain a challenge which can be mitigated by focusing on subsidising small business early (Kelley et al., 2016; Herrington & Kew, 2018).

Previous research has shown that SMEs in South Africa has one of the lowest survival rates in the world (Herrington & Kew, 2018). However, with business development support the survival rate after one year has been shown to be around 80% compared with a failure of 80% in the first year without business support (Davis, 2010; Herrington & Kew, 2018). Business development support coupled with equity holding by the business developer has also been shown to improve survival rate and business performance in other African countries. An example being Baobab Products Mozambique which provides women with the opportunity to be shareholders and contribute to the economy (SEED, 2014).

The results showed that 80% of employees were fewer than fifty (50) which is in line with the South African GEM report 207/2018 which presented a low expectation of employee employment in the next five years. This low intention to reduce unemployment will also hinder business sustainability and growth (Herrington & Kew, 2018).

The study results presented that 90% of firms had an annual turnover of below R50 million. This implies that 10% of firms had revenue exceeding R50 Million. This is a significantly higher proportion compared to the Seed report (Rachelson, 2018).

5.3 Discussion pertaining to Hypothesis 1

The study investigates the relationship between the organisational internal factors and SMEs' innovativeness. The literature discussions indicated that firms supportive of entrepreneurial behaviour in emerging economies tend to achieve innovativeness. The results from this study in a South African context indicated that SMEs in Gauteng have positively implemented some of the organisational internal factors supportive of innovativeness, namely management support for innovative ideas, management support to execute ideas, rewards/reinforcement, time availability to handle the workload and time availability constraints on the job.

The study also highlights challenges related to the organisational internal factors that were not supported in this South African context, namely work discretion/autonomy and organisational boundaries. The study analyses the results focusing on supported and not supported organisational internal factor in a South African context.

H1a: There is a positive relationship between the organisational antecedent of management support and SMEs' innovativeness.

Previous research has indicated that the willingness of management and firms to support new ideas from employees and linking career promotion to entrepreneurial behaviour facilitates corporate entrepreneurship (Scheepers et al., 2008). The employee's innovative outputs are visible when management has created an environment that supports innovation and risk-taking (Hornsby et al., 2002).

Research has considered management support in large firms to be associated with a pro-entrepreneurial organizational environment and entrepreneurial actions from employees (Hornsby et al., 2002; Ireland et al., 2009). The results from this study support this view in terms of SMEs emerging economy context that they provide an environment that encourages entrepreneurial behaviour and innovation. SMEs, due to their small size create a conducive environment and an accessible link between employees and management to support innovation and execution of employees' ideas (Kuratko et al., 2015).

Hypothesis 1a of this study demonstrates the existence of a positive relationship between organisational antecedents of management support and SMEs' innovativeness. The test indicated two variables, being management support for innovative ideas and management support to execute innovative ideas both with a positive relationship between the SMEs' innovativeness. The results indicated the two alternative hypotheses of management support.

5.3.1 H1a_1: There is a positive relationship between Management support for innovative ideas and SMEs' innovativeness.

The result supported the alternative H1a_1 by presenting a p-value of 0.002 for management support for innovative ideas as it was positively and significantly related to SMEs innovativeness. The result is consistent with the literature and has demonstrated that support from management towards employees' innovative ideas yield innovativeness within the firm (Kuratko et al., 2014). The employees' creativity is mirrored by the support received from management (Hornsby et al., 2002).

5.3.2 H1a_2: There is a positive relationship between Management support to execute ideas and SMEs innovativeness.

The results supported the alternative H1a_2 by presenting a p-value of 0.000 for management support to execute innovative ideas as it was positively and significantly related to SMEs' innovativeness. This outcome is consistent with the literature and has demonstrated that management support to implement employees' innovative ideas yields innovativeness within the firm (Kuratko et al., 2015).

5.4 Discussion pertaining to Hypothesis 2

H1b: There is a positive relationship between the organisational antecedent of work discretion/autonomy and SMEs innovativeness.

Previous research has demonstrated that positive entrepreneurial outcomes pertaining to management support with regards to the freedom afforded to employees to take a certain level of risk in a firm (Hornsby et al., 2002). However, the results of this study in the South African SMEs context indicate that the respondents, in this case, owner-managers did not support or provide work

discretion opportunities to the employees within their firms. These results could have been influenced by the managers who think that they should lead in all aspects of the business.

This type of behaviour could work in the initial phase of the business. However, it may be a hindrance to the firm's innovative capability due to limited opportunities for experimentation and allowing new ideas. A delegation structure as a firm strategy from management will assist with positive entrepreneurial behaviour and tolerance to failures in the firm (Ireland et al., 2009; Kuratko et al., 2014; Scheepers et al., 2008).

The hypothesis explains that firms that take a decision that allows employees to take risks and work flexibility create independence in employees (Hornsby et al., 2002). The results did not support this hypothesis and presented a p-value of 0.334 for work discretion. The relationship of work discretion was negative and not significant between SMEs' innovativeness and work autonomy. This finding was consistent with results from literature that did not support this relationship (Urban, 2017).

5.5 Discussion pertaining to Hypothesis 3

H1c: There is a positive relationship between the organisational antecedent of rewards/reinforcement and SMEs innovativeness

Research papers have demonstrated that corporate entrepreneurship is prevalent in both large and small firm and this can be supported through organisational systems that encourage entrepreneurial activities (Hornsby et al., 2002; Ireland et al., 2009). The study in the South African SMEs context supports and indicates that the respondents, in this case, owner-managers, are willing to link the rewards to the employee's entrepreneurial efforts. Employees tend to participate in innovative initiatives when they see a link between the reward system and their job activities (Kuratko et al., 2014).

The results are consistent with previous studies that reported that reward systems which aligned the organisation and employees' goals provide a positive culture within a firm (Hornsby et al., 2009). The results of the study indicate that owner-

managers in SMEs understand the crucial impact of rewards to encourage corporate entrepreneurship and innovativeness and this can be illustrated in various ways such as financial incentives and completing interesting work (Hornsby et al., 2009).

The hypothesis explains the impact of the reward system within a firm that motivates entrepreneurial thinking employees. This hypothesis is supported by the results and is in line with literature due to the existence of the relationship although it was not significant (Ireland et al., 2009). The results supported and presented a p-value of 0.943 for rewards. The relationship of rewards was positive and not significant between SMEs' innovativeness and rewards.

5.6 Discussion pertaining to Hypothesis 4

H1d: There is a positive relationship between the organisational antecedent of time availability and SMEs' innovativeness.

Prior research emphasises that management must provide a positive perception of resource availability in the firm as a strategy to encourage employees to feel motivated to participate in entrepreneurial actions. (Goodale, Kuratko, Hornsby & Covin, 2011). Research indicates that when employees are afforded time to explore and exploit opportunities this will initiate innovation (Kuratko et al., 2014).

The study in the South African SMEs context indicates that the respondents, in this case, owner-managers, confirms that employees are provided with just the right time to handle the workload and also highlighted time availability constraints on the job for innovation which allows employees to find time to create innovative ideas. The results further highlighted unstructured time availability acts as an encouragement to create innovative ideas (Kuratko et al., 2014).

Hypothesis 1d of this study demonstrates the existence of a positive relationship between organisational antecedents of time availability and SMEs' innovativeness. The test indicated two variables, being time availability to handle the workload and time availability constraints on the job both having a positive relationship with SMEs' innovativeness. The results indicated the two alternative hypotheses of time availability.

5.6.1 H1d_1: There is a positive relationship between the organisational antecedent of Time availability to handle the workload and SMEs' innovativeness.

The result supported the alternative H1d_1 by presenting a p-value of 0.009 of time availability to handle the workload as it was positively and significantly related to SMEs' innovativeness. The result is consistent with the literature and has demonstrated that management support of employees with time availability creates the space for employees to manage various workloads that promote entrepreneurship (Hornsby et al., 2009).

5.6.2 H1d_2: There is a positive relationship between the organisational antecedent of time availability constraints on the job and SMEs' innovativeness.

The result supported the alternative H1d_2 by presenting a p-value of 0.016 of time availability constraints on the job as it was positively and significantly related to SMEs' innovativeness. The result is consistent with the literature and has demonstrated that management support of employees with time availability allows employees to explore and exploit new opportunities that are innovative, and which are considered to be outside their work schedule (Kuratko et al., 2014).

5.7 Discussion pertaining to Hypothesis 5

H1e: There is a positive relationship between the organisational antecedent of organisational boundaries and SMEs' innovativeness

Flexible organisational boundaries are important between a firm and the external environment as it allows employees to facilitate quick decision making (Hornsby et al., 2009). The flexible organisational boundaries encourage entrepreneurial activities within a firm because of the ability to allow free flow of information within the internal and external environment of the firm (Burgess, 2013). Processes and standards that are in place assist both management and employees to maintain an innovative entrepreneurial environment (Kuratko et al., 2014).

In the context of this study, it is clear that owner-managers are not aware of their employees' work performance and there are no structures to access information internally and externally. In the context of Africa, these results could be influenced by the management of unstructured institutions and resources which could lead

to poor performance of firms (Zoogah et al., 2015). The results are not consistent with previous studies that highlight the importance of a conducive environment that allows employees to make decisions and execute tasks without organisational barriers (Burgess, 2013).

The hypothesis describes that firms that allow an environment that facilitates free flow of information tend to have quick decision-making structures (Hornsby et al., 2009). The results did not support this hypothesis and presented a p-value of 0.150 for organisational boundaries. The relationship of organisational boundaries was negative and not significant between SMEs innovativeness and organisational boundaries. This finding was not consistent with results from literature that support this relationship (Hughes & Mustafa, 2017; Urban, 2017).

5.8 Conclusion

This chapter discussed the results presented in chapter 4 and related the results to the literature discussed in chapter 2. The results from the demographic profile and the firm characteristics were discussed and related to literature. The findings of the first hypothesis results indicated that management support for innovative ideas and management support to execute innovative ideas has a positive and significant relationship between the SME innovativeness. This emphasises that management support in a firm is critical towards positive employees' behaviour that creates innovative output in a firm (Kuratko et al., 2014; Scheepers et al., 2008). The result of the second hypothesis concluded that there was a negative relationship and no significant relationship between the organisational antecedent of work discretion/autonomy and SMEs' innovativeness.

This outcome was found to be consistent with other studies conducted in an African context (Hughes & Mustafa, 2017; Urban, 2017). The results of the third hypothesis concluded that although there is a positive relationship, there is no significant relationship between the organisational antecedent of rewards/reinforcement and SMEs' innovativeness. These results are consistent with other studies that have identified that reward systems have a positive relationship on employees to take risks and innovative tasks (Kuratko et al., 2014).

The fourth hypothesis results indicated that there is a positive and significant relationship between time availability to handle the workload, time availability constraints and SME innovativeness. These results are consistent with studies that emphasise that management support towards time availability allows employees to take risks and concentrate on innovativeness (Kuratko et al., 2014; Hornsby et al., 2009).

The fifth hypothesis results concluded that there was a negative relationship and no significant relationship between the organisational antecedent of organisation boundaries and SMEs' innovativeness. This outcome was not consistent with other studies conducted in an African context (Hughes & Mustafa, 2017; Urban, 2017). The hypotheses are supported except for organisational antecedent of discretion/autonomy and the organisational antecedent of organisation boundaries. The next chapter discusses the conclusions, recommendations and implications for future researchers looking to expand on this study.

CHAPTER 6: CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

6.1 Introduction

This final chapter draws insights from the previous chapters and presents the conclusion to the study problems described in chapter 1. The chapter focuses on the conclusions, recommendations, and the implications of the study. The study also provides future researchers with the suggestion of areas for future research.

6.2 Conclusions of the study

The base on which the study was built is related to organisational internal factors and the innovativeness of SMEs in Gauteng. The objective of the study was to investigate these organisational internal factors and analyse their influence on the SMEs' innovativeness. Literature review identified and discussed these organisational internal factors from previous research and formulated testable hypotheses in a South African context, focusing on a multi-sector industry. The factor analysis produced eight factors, with alternative hypotheses resulting from management support and time availability adding to the existing literature in a South African context.

The regression analysis was conducted, and the results demonstrated that the independent variables predict 25% in variation of SME innovativeness. The control variables and the independent variables contributed to 26% of the dependent variable. The results indicated that the control variables and the independent variables were significant in predicting the dependent variable. Consistent with the researcher's premises, the study proved a positive relationship between alternative hypotheses of management support for innovative ideas and executing ideas and SME innovativeness. The study did not find a positive relationship between the organisational antecedent of work discretion/autonomy and SMEs' innovativeness.

The study highlighted a positive relationship between the organisational antecedent of rewards/reinforcement and SMEs' innovativeness. The study further demonstrated a positive relationship between alternative hypotheses of time availability to handle the workload and time availability constraints on jobs

and SME innovativeness. The study did not find a positive relationship between the organisational antecedent of organisational boundaries and SMEs' innovativeness. The study indicated that the organisation internal factors are also applicable to SMEs' structure to facilitate entrepreneurial behaviour and innovativeness within firms.

6.2.1 Contribution of the study

The study highlighted the important organisational internal factors found in a firm irrespective of size, by indicating their significant contribution to corporate entrepreneurship and continuous innovation (Morris et al., 2010). Large and small firms of all disciplines that implement innovation have considered it as a competitive tool that led to the success of their organisations (Kuratko, Goldsby & Hornsby, 2012). The study has provided insight to the SMEs owner-managers and policy-makers, that a sustainable corporate entrepreneurship strategy directs firms towards innovation that is needed globally and locally to survive uncertain economic challenges (Ireland et al., 2009).

The study provides insights to SMEs' owners that focus on entrepreneurial behaviour and innovativeness to maintain competitiveness. The study provides the government with insight into the SMEs internal factors that contribute to innovativeness and these principles could also be adopted in State-Owned companies to facilitate innovation. Despite the government commitment to inclusive participation, the study results emphasised a much-needed focus on youth and female entrepreneurs to start new businesses in South Africa.

The government could also look at policies that encourage less educated individuals into formal entrepreneurship. The government could implement policies that provide incentives, partners with private companies and provide entrepreneurship education to addresses these deficiencies. The government can also look at development partners to assist SMEs technically, probably also allowing them to take an equity stake to align interest. There have been success stories with this approach applied in other African countries (SEED, 2014; Urban, 2020).

6.3 Implications and Recommendations

Innovation is enabled by management in a firm through constant scanning of the environment for opportunities, experimentations and flexible organisational designs (Urban, 2016). The study analysed the results based on the owner-managers perspective of organisational internal factors and SMEs' innovativeness in a South African context. The study identified an important area that requires attention from the government as the youth between age group 18 and 24 years that displayed zero entrepreneurial activity. Support and development of the youth to take up entrepreneurship could assist the government to reduce unemployment and increase economic growth.

Although there is a high percentage of blacks taking up entrepreneurship, there is still a low percentage of females' participation in entrepreneurship. It is important to motivate females to participate in entrepreneurship in all sectors of the economy. The study findings can be used in practice to instigate innovativeness within the SMEs by improving on organisational internal factors within the firms. Recommendations emanating from this research are provided in terms of policy, practice, and academic implications.

6.3.1 Implication on Policy

The results showed an increased interest of 32% of female entrepreneurs who have started SMEs. However, there is still a significant gap with the male entrepreneurs compared to developed economies (Bosma, 2020). This situation calls for interventions that the government can consider:

- Government can consider entrepreneurship education in schools' curriculums from basic education to higher education.
- Government can develop policies that are strict on the development of female entrepreneurs for big enterprises that are conducting business with the State-Owned companies.
- Government can also consider policies that will encourage formal entrepreneurship within the less educated group.

The government could implement policies that attract and incentivise SMEs that produce innovations that contribute positively to economic growth and reduce

unemployment. The government can also adopt this type of corporate entrepreneurship structure within the State-Owned companies to increase the level of innovativeness.

An investigation as to why this study and previous studies are showing a declining proportion of entrepreneurs from the white race (Herrington & Kew, 2018; Levin et al, 2019). The findings can be used to set up policies to address this decline.

Evidence from the study results indicated non-existent entrepreneurial activity among the youth. This area requires urgent focus from the government in terms of interventions that could attract the youth in starting new businesses. The government can implement policies that allocate and give preference on certain projects to the youth. This approach will attract and create competition amongst the young to create new innovative ventures that will contribute to economic growth and reduce unemployment.

6.3.2 Implication on practice

Although the study emphasised the importance of entrepreneurial activity within the firms, managers are required to implement policies and incentives that encourage employees to take part in innovative activities. It is recommended that SMEs' owners consider their employees' innovative ideas and provide them with time to be creative to provide implementable innovative ideas. It is also recommended to SMEs' owner-managers to consider policy implementation that encourages organisational internal factors that facilitate SMEs' innovativeness.

The study also identified rewards as an area that encouraged employees to be entrepreneurial and innovative. SMEs that would like to maintain innovativeness need to come up with internal policies and incentive systems that reward employees fairly and stimulates employees' innovativeness. The study provides insights to SMEs' owners that focus on entrepreneurial behaviour and innovativeness to maintain competitiveness. This suggests that managers should foster corporate entrepreneurship and innovativeness through policies and incentive systems (Kuratko et al., 2014).

6.3.3 Implication for academics

A cross-sectional study was conducted. There may be a need to conduct a longitudinal study to obtain observation of organisational internal factors and SME innovativeness in the South African context over a long period. The research will assist SMEs' owners to understand the competitive positioning of their firms over a long period.

The results presented a high percentage in terms of the level of education of entrepreneurs who are starting businesses in South Africa. These high levels of academic education within the firm's employees contribute positively to entrepreneurial actions, competitiveness and innovativeness within the firms (Herrington & Kew, 2016). Entrepreneurship education is a critical skill that can be considered for the creation and development of SMEs in South Africa and this can be conducted in the context of individual or firm-level applicable to entrepreneurial process (Herrington & Kew, 2016).

6.4 Limitations of the study

Similar to other quantitative research, the study was limited to a cross-sectional design which did not consider causality inferences. Qualitative longitudinal studies may be considered to test the influence of organisational internal factors on SMEs' innovativeness. The study was limited in terms of generalising the research findings across South Africa and Africa because the study focused on firms in Gauteng. Future researchers may expand this study to the rest of the provinces in South Africa and may need to conduct a comparative study to view whether the results are generalisable amongst SMEs across South Africa in a similar context. The study can also be done on an interval basis, for example, every five (5) years period, to measure emerging trends and entrepreneurial behaviour to different economic cycles.

The study focussed on SMEs as defined by the National Small Business Amendment Act 29 of 2004 which states a total FTE of paid employees and an annual turnover. The study took a multi-sector approach directed at managers and owners with the SMEs. The SMEs that participated must have operated for

one year and above to be considered. The study was limited to testing the influence of organisational internal factors on SMEs' innovativeness.

6.5 Suggestions for further research

Researchers looking at expanding this research in future may consider a qualitative study on this topic. The researcher may focus on investigating the moderating effect of technology orientation on SMEs' innovativeness that was not considered in the study.

Future researchers may also look at the impact of *force majeure* (COVID 19) that affects the organisational internal factors which lead to higher innovativeness. The other suggestion is for future researchers to consider expanding the study across South Africa and Africa. The study indicated that there was no entrepreneurial activity within the youth in Gauteng, it will be interesting to see results from other provinces.

Future researchers can also conduct a comparative study between provinces and other African countries. Further research can also look at the impact of current policies on the results.

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APPENDIX A

Research instrument

Section A: Demographics

Please indicate the appropriate option from the following statements by crossing one option in each line:	Selection is indicated below: (X)
Section A: Demographic information	
1. Gender	
a) Male	
b) Female	
c) Other	
2. Age	
a) Between 18 to 24 years	
b) Between 25 to 34 years	
c) Between 35 to 44 years	
d) Between 45 to 54 years	
e) Older than 55 years	
3. Race	
a) Black /African	
b) White	
c) Coloured	
d) Indian	
e) Asian	
f) Other	
4. The highest educational qualifications achieved	
a) Grade 12 or Matric	
b) Diploma/Post Matric Certificate	
c) Bachelor's degree	
d) Master's degree	

e) Doctoral degree	
f) Other	
5. Industry classification	
a) Agriculture	
b) Mining and quarrying	
c) Manufacturing	
d) Electricity, gas and water	
e) Construction	
f) Retail, motor trade and repair services	
g) Wholesale	
h) Catering, accommodation and other trade	
i) Transport, storage and communications	
j) Finance and business services	
k) Community, social and personal services	
6. The firm age	
a) Between one (1) to five (5) years	
b) Between five (5) to ten (10) years	
c) Between eleven (11) to fifteen (15) years	
d) Between sixteen (16) to twenty (20) years	
e) More than twenty (20) years	
7. The firm size: Full-time employees	
a) Fewer than fifty (50) employees	
b) Between fifty (50) to (100) employees	
c) Between one hundred and one (101) to two hundred (200) employees	
d) Between two hundred and one (201) to two hundred fifty (250) employees	
e) More than two hundred fifty (250) employees	
8. What is the total turnover of the company	
a) Below R50 Million	
b) Between R50 Million to R100 Million	

c) Between R101 Million to R200 Million	
d) Between R201 Million to 300 Million	
e) More R300 Million	

Section B: Organisational internal factors

An adopted questionnaire: CEAI will be used for sampling and it is modified for SMEs owners and managers participant (Kuratko et al., 2014).

Please indicate how much agree or disagree with the following statements by crossing one option in each line bold with (X):	Variable coding	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Management support								
1. Our organization is quick to use improved work methods.	MS1	1	2	3	4	5	6	7
2. Our organization is quick to use improved work methods that are developed by workers.	MS2	1	2	3	4	5	6	7
3. In our organization, developing one's own ideas is encouraged for the improvement of the corporation.	MS3	1	2	3	4	5	6	7
4. Upper management is aware and very receptive to employees' ideas and suggestions.	MS4	1	2	3	4	5	6	7
5. A promotion usually follows from the development of new and innovative ideas.	MS5	1	2	3	4	5	6	7
6. Those employees who come up with innovative ideas on their own often receive management encouragement for their activities.	MS6	1	2	3	4	5	6	7
7. The "doers on projects" are allowed to make decisions	MS7	1	2	3	4	5	6	7

without going through elaborate justification and approval procedures.								
8. Senior managers encourage innovators to bend rules and rigid procedures to keep promising ideas on track.	MS8	1	2	3	4	5	6	7
9. Many top managers have been known for their experience with the innovation process.	MS9	1	2	3	4	5	6	7
10. Money is often available to get new project ideas off the ground.	MS10	1	2	3	4	5	6	7
11. Individuals with successful innovative projects receive additional rewards and compensation beyond the standard reward system for their ideas and efforts.	MS11	1	2	3	4	5	6	7
12. There are several options within the organization for individuals to get financial support for their innovative projects and ideas.	MS12	1	2	3	4	5	6	7
13. People are often encouraged to take calculated risks with ideas around here.	MS13	1	2	3	4	5	6	7
14. Individual risk-takers are often recognized for their willingness to champion new projects, whether eventually successful or not.	MS14	1	2	3	4	5	6	7
15. The term "risk-taker" is considered a positive attribute for people in this organization.	MS15	1	2	3	4	5	6	7
16. This organization supports many small and experimental projects, realizing that some will undoubtedly fail.	MS16	1	2	3	4	5	6	7

17. An employee with a good idea is often given free time to develop that idea.	MS17	1	2	3	4	5	6	7
18. There is a considerable desire among people in the organization for generating new ideas without regard for crossing departmental or functional boundaries.	MS18	1	2	3	4	5	6	7
19. People are encouraged to talk to employees in other departments of this organization about ideas for new projects.	MS19	1	2	3	4	5	6	7
Work discretion								
20. Employees are given the freedom to make decisions without having to double-check all their decisions with someone else.	WD1	1	2	3	4	5	6	7
21. Harsh criticism and punishment result from mistakes made on the job.	WD2	1	2	3	4	5	6	7
22. This organization provides employees with the chance to be creative and try their own methods of doing the job.	WD3	1	2	3	4	5	6	7
23. This organization provides employees with the freedom to use their own judgment.	WD4	1	2	3	4	5	6	7
24. This organization provides employees with the chance to do something that makes use of their abilities.	WD5	1	2	3	4	5	6	7
25. Employees have the freedom to decide what to do in their job.	WD6	1	2	3	4	5	6	7
26. It is an employee's responsibility to decide how their job gets done.	WD7	1	2	3	4	5	6	7

27. Employees almost always get to decide what to do on their job.	WD8	1	2	3	4	5	6	7
28. Employees have much autonomy in their job and are left on their own to do their work.	WD9	1	2	3	4	5	6	7
29. Employees seldom have to follow the same work methods or steps for doing their major tasks from day to day.	WD10	1	2	3	4	5	6	7
Rewards/Reinforcement								
30. Management help employees get their work done by removing obstacles and roadblocks.	RR1	1	2	3	4	5	6	7
31. The rewards employees receive are dependent upon their innovation on the job.	RR2	1	2	3	4	5	6	7
32. Employee supervisor increases the employee job responsibilities if they are performing well in their job.	RR3	1	2	3	4	5	6	7
33. Employee supervisor gives employees special recognition if their work performance is especially good.	RR4	1	2	3	4	5	6	7
34. Employee manager tells his/her boss if employee work was outstanding.	RR5	1	2	3	4	5	6	7
35. There is a lot of challenges in the employees' job.	RR6	1	2	3	4	5	6	7
Time availability								
36. During the past three months, employee workload kept them from spending time on developing new ideas.	TA1	1	2	3	4	5	6	7
37. Employees always seem to have plenty of time to get everything done.	TA2	1	2	3	4	5	6	7

38. Employees have just the right amount of time and workload to do everything well.	TA3	1	2	3	4	5	6	7
39. Employees' job is structured so that they have very little time to think about wider organizational problems.	TA4	1	2	3	4	5	6	7
40. Employees feel that they are always working with time constraints on their job.	TA5	1	2	3	4	5	6	7
41. Employees and their co-workers always find time for long-term problem-solving.	TA6	1	2	3	4	5	6	7
Organisational boundaries								
42. In the past three months, employees have always followed standard operating procedures or practices to their major tasks.	OB1	1	2	3	4	5	6	7
43. There are many written rules and procedures that exist for employees to do major tasks.	OB2	1	2	3	4	5	6	7
44. Employees do not doubt what is expected from them on their job.	OB3	1	2	3	4	5	6	7
45. There is little uncertainty in the employees' job.	OB4	1	2	3	4	5	6	7
46. During the past year, immediate supervisor discussed their employees work performance with them frequently.	OB5	1	2	3	4	5	6	7
47. The employees' job description specifies the standards of performance on which their job is evaluated.	OB6	1	2	3	4	5	6	7
48. Employees know the level of work performance that is expected from them in terms of amount, quality, and timelines of output.	OB7	1	2	3	4	5	6	7

Section C: SME Innovativeness

The instrument to measure innovativeness and it is modified for SMEs owners and managers participant (Plambeck, 2012; Urban, 2017)

Please indicate how much agree or disagree with the following statements by crossing one option in each line bold with (X):	Variable coding	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Innovativeness								
49. Our company has identified the technique or methods that are highly innovative and totally new to the industry.	INNO1	1	2	3	4	5	6	7
50. Our company has identified techniques or methods that are one of their kind in the industry.	INNO2	1	2	3	4	5	6	7
51. Our company has identified techniques or methods that relied on technology that has not been used in the industry before.	INNO3	1	2	3	4	5	6	7
52. Our company has identified techniques or methods that have unique features.	INNO4	1	2	3	4	5	6	7
53. Our company place a strong emphasis on innovative products or services	INNO5	1	2	3	4	5	6	7
54. Our company has a widely held belief that innovation is an absolute necessity for the business's future.	INNO6	1	2	3	4	5	6	7

APPENDIX B

Consistency matrix

To investigate the influence of various organisational internal factors on the innovativeness of SMEs in Gauteng Province, South Africa.					
Sub-problem	**Literature Review**	**Hypotheses or Propositions or Research questions**	**Source of data**	**Type of data**	**Analysis**
The first sub problem is to determine the influence of management support on SMEs' innovativeness.	(Hambrick & Mason, 1984; Hornsby, Kuratko &Zahra, 2002; Ireland, Covin &Kuratko, 2009; Kuratko, Hornsby &Hayton, 2015; Kuratko, Hornsby &Covin, 2014; Scheepers, Hough &Bloom, 2008)	H1a: There is a positive relationship between the organisational antecedent of management support and SMEs' innovativeness.	Administered the CEAI and the innovativeness using an online survey through Qualtrics distributed to SMEs in Gauteng. 7-point Likert scale ○ Organisational antecedents of management support that drive SMEs' innovativeness measured through: **Questions**: Management support (MS1- 19)	Nominal and ordinal data	Descriptive statistics Exploratory factor analysis (EFA) Instrument reliability (Cronbach alpha) Pearson correlation test and regression analysis

To investigate the influence of various organisational internal factors on the innovativeness of SMEs in Gauteng Province, South Africa.					
Sub-problem	**Literature Review**	**Hypotheses or Propositions or Research questions**	**Source of data**	**Type of data**	**Analysis**
The second sub problem is to ascertain the influence of work discretion/autonomy on SMEs' innovativeness.	(Hornsby et al., 2002; Ireland et al., 2009; Scheepers et al., 2008)	H1b: There is a positive relationship between the organisational antecedent of work discretion/autonomy and SMEs' innovativeness.	Administered the CEAI and the innovativeness using an online survey through Qualtrics distributed to SMEs in Gauteng. 7-point Likert scale ○ Organisational antecedents of work discretion/autonomy that drive SMEs' innovativeness measured through: **Questions**: Work discretion/autonomy (WD1-10)	Nominal and ordinal data	Descriptive statistics Exploratory factor analysis (EFA) Instrument reliability (Cronbach alpha) Pearson correlation test and regression analysis

To investigate the influence of various organisational internal factors on the innovativeness of SMEs in Gauteng Province, South Africa.					
Sub-problem	**Literature Review**	**Hypotheses or Propositions or Research questions**	**Source of data**	**Type of data**	**Analysis**
The third sub problem is to establish the influence of rewards/reinforcement on SMEs' innovativeness.	(Bayarçelik & Özşahin, 2014; Hornsby, Kuratko, Shepherd &Bott, 2009; Ireland et al., 2009)	H1c: There is a positive relationship between the organisational antecedent of rewards/reinforcement and SMEs' innovativeness.	Administered the CEAI and the innovativeness using an online survey through Qualtrics distributed to SMEs in Gauteng. 7-point Likert scale ○ Organisational antecedents of rewards/reinforcement that drive SMEs' innovativeness measured through: **Questions**: Rewards/reinforcement (RR1-6).	Nominal and ordinal data	Descriptive statistics Exploratory factor analysis (EFA) Instrument reliability (Cronbach alpha) Pearson correlation test and regression analysis

To investigate the influence of various organisational internal factors on the innovativeness of SMEs in Gauteng Province, South Africa.					
Sub-problem	**Literature Review**	**Hypotheses or Propositions or Research questions**	**Source of data**	**Type of data**	**Analysis**
The fourth sub problem is to determine the influence of time availability on SMEs' innovativeness.	(Hornsby, Kuratko, Shepherd &Bott, 2009; Ireland et al., 2009; Kuratko et al., 2014; Scheepers et al., 2008)	H1d: There is a positive relationship between the organisational antecedent of time availability and SMEs' innovativeness.	Administered the CEAI and the innovativeness using an online survey through Qualtrics distributed to SMEs in Gauteng. 7-point Likert scale ○ Organisational antecedents of time availability that drive SMEs' innovativeness measured through: **Questions**: Time availability (TA1- 6)	Nominal and ordinal data	Descriptive statistics Exploratory factor analysis (EFA) Instrument reliability (Cronbach alpha) Pearson correlation test and regression analysis

To investigate the influence of various organisational internal factors on the innovativeness of SMEs in Gauteng Province, South Africa.					
Sub-problem	**Literature Review**	**Hypotheses or Propositions or Research questions**	**Source of data**	**Type of data**	**Analysis**
The fifth sub problem is to examine the influence of organisational boundaries on SMEs' innovativeness.	(Burgess, 2013; Hornsby et al., 2009; Kuratko et al., 2014)	H1e: There is a positive relationship between the organisational antecedent of organisational boundaries and SMEs' innovativeness.	Administered the CEAI and the innovativeness using an online survey through Qualtrics distributed to SMEs in Gauteng. 7-point Likert scale ○ Organisational antecedents of organisational boundaries that drive SMEs' innovativeness measured through: **Questions**: Organisational boundaries (OB1- 07)	Nominal and ordinal data	Descriptive statistics Exploratory factor analysis (EFA) Instrument reliability (Cronbach alpha) Pearson correlation test and regression analysis

APPENDIX C

Ethics clearance certificate

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

SCHOOL OF GRADUATE SCHOOL OF BUSINESS ADMINISTRATION ETHICS COMMITTEE
CONSTITUTED UNDER THE UNIVERSITY HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER WBS/BA548008/681**
PROJECT TITLE	Organisational internal factors and the innovativeness in SMEs in Gauteng, South Africa
INVESTIGATOR	Ms Chuene Mavimbela
SCHOOL/DEPARTMENT OF INVESTIGATOR	MM (Entrepr & New Venture Creation)
DATE CONSIDERED	09 October 2020
DECISION OF THE COMMITTEE	Approved unconditionally
RISK LEVEL	MINIMAL RISK
EXPIRY DATE	30 JUNE 2021

ISSUE DATE OF CERTIFICATE 23 October 2020 **CHAIRPERSON** _____
(Dr MDJ Matshabaphala)

cc: Supervisor: Prof Urban

DECLARATION OF INVESTIGATOR

To be completed in duplicate and **ONE COPY** returned to the Chairperson of the School/Department ethics committee.

I fully understand the conditions under which I am are authorized to carry out the abovementioned research and I guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee.

_____ 26 /October / 2020
Signature **Date**

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES