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The contribution of corporate entrepreneurial dimensions on firm performance in South African Non-Governmental Organisations

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

Corporate entrepreneurship (CE) has been suggested by various scholars as occurring when an individual or a group of individuals in an established company display behaviour that is typically practised by individual entrepreneurs. Literature supports the notion that corporate entrepreneurial practices can be implemented as a means to improve company's performance, and that it may result in an organisation obtaining a competitive advantage. CE dimensions are specific characteristics that are evident in firms that embody the following: innovativeness; risk-taking; proactiveness; autonomy; and competitive aggressiveness.

The purpose of this study was to investigate and empirically determine the contribution of CE dimensions on firm performance within South African non-governmental organisations (NGOs) in the health industry, by also considering the moderating effects of the organisation's climate on this relationship. Furthermore, this study sought to provide important findings that might aid NGOs and other policymakers to determine key interventions that could be included in particular policies, so as to assist such organisations to grow and to remain sustainable, so that they can address the much-needed socio-economic gaps in the South African health sector.

A quantitative research technique was used, as the study proposed to measure relationships, as well as predictions, between two or more constructs. A sample size of 103 respondents was aimed for, based on a total target population of 288, with a total of 66 responses having been captured for analysis after the data screening and cleaning process, representing a response rate of 64% from the original targeted 103 sample size.

With the exception of the CE dimension of autonomy and proactiveness, the other three dimensions, namely innovativeness, risk-taking and competitiveness were perceived to be key influencers in firm performance in terms of business growth, within South African NGOs that aid in HIV/AIDS research, treatment and care. Interestingly, although the autonomy dimension resulted in a negative influence in its relationship on firm performance, the empirical evidence suggests that, when this dimension is moderated by leadership factors, it changes to a positive outcome on firm performance, thereby

confirming that, for positive firm performance to be experienced in South African NGOs, autonomy is a good influencer only if the leadership criteria govern the same.

The study further demonstrated that leadership inversely influences the relationship between innovativeness, risk-taking and competitive aggressiveness. In the context of previous literature, such was to have been expected, as it was noted that, for leadership factors to influence relationships in a test positively, the interaction among the particular variables is important, including their moderating and mediating. The interaction terms and the type of leadership factors involved might influence a particular relationship.

This study sought to provide empirical evidence suggesting that, by embodying CE in means of its various dimensions, firm performance will be positively influenced in terms of the growth of the business. Such, in turn, should allow such organisations to remain sustainable by means of obtaining a competitive edge, and perhaps even by discovering innovative ways of generating income to drive their socio-economic mission.

Key words: Innovativeness; Risk-taking; Proactiveness; Competitive Aggressiveness; Autonomy; Leadership; Non-Government Organisation (NGO)

DECLARATION

I, _____Keshan Naidoo_____, 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.



Keshan Naidoo

Signed at ……Midrand……

On the ……28th…….. day of ……January……..……2022

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CHAPTER 1: INTRODUCTION

1.1 Introduction

HIV/AIDS has placed a tremendous burden on the South African health care system. The South African government has had to consider creative ways in which to ensure that the population infected with the virus has access to quality health care, regardless of their socio-economic status. Government, via the Department of Health of South Africa (DoH), implemented the National Health Insurance Fund (NHI) in 2012 with an intentional expiry date of 2025 (Katuu, 2018). The NHI seeks to ensure that the South African population have access to reasonable service delivery in terms of healthcare (Tshabalala-Msimang, 2008, as cited in Katuu, 2018), and that they receive the required healthcare no matter their financial position (Bernitz, 2014, as cited in Katuu, 2018). Essentially the purpose of the fund is to attempt to remove financial obstacles that may hinder one from receiving healthcare services (Katuu, 2018).

According to Katuu, 2018 the NHI is to be implemented in three stages over the above-mentioned period. The DoH indicate that the three stages will attempt to accomplish key objectives, which include (1) the enhancement of quality healthcare and service-delivery; (2) to establish structures and services that the NHI fund will function within and (3) to enable the full operationalization of the NHI fund (Department of Health South Africa, 2015, as cited in Katuu, 2018). South Africa has a significant burden of disease, perpetuated by HIV and AIDS, along with circumstances of poverty such as poor nutrition, sanitation, etc, which has to be taken into account particularly in the public health care sector, for the reformation of the health care system (Johnston & Spurrett, 2011). Harrison (2009) suggests that a strategy that the DoH should be required to carry out is to improve the health care system's better use of non-governmental organisations (NGOs).

Over recent years, the state has begun to turn to NGOs for assistance with the treatment of patients infected with HIV/AIDS, and for technical support for prevention. Inherently, NGOs that operate in such a space may be faced with various obstacles to answering the

state's call for assistance. Such is particularly so in the securing of ongoing funding from state or international entities, given the financial implications of rendering health care services to the population infected with HIV/AIDS, which, for the purpose of the current paper, is the focus. Kevany et al. (2009), investigated the cost implications of providing secondary level care for patients infected with HIV whom were initiated onto Antiretroviral Therapy (ART). The study noted that even though ART improved the life expectancy of those infected with HIV (Forsythe & Gilks, 1999, as cited in Kevany et al., 2009), a noteworthy number of morbidity and mortality are experienced by infected patients with progressive HIV and whom commence with ART (Casseb et al., 2003, as cited in Kevany et al., 2009). Therefore, care is required should treatment fail making the cost implications significant (Arens & Maartens, 2004, as cited in Kevany et al., 2009).

In order to determine the cost implications, the study examined 25 inpatients and 48 outpatients whom were receiving treatment and care for antiretroviral associated conditions at the G F Jooste Hospital in South Africa (Kevany et al., 2009). The study revealed that amongst both the inpatients and outpatients whom participated in the study experienced incremental costs associated with their treatment and care (Kevany et al., 2009). Costs related to medical personnel was in excess of 50% amongst both patient categories. Costs related to infections and diagnoses was in excess of 40% amongst both patient categories (Kevany et al., 2009).

The results of the study concluded that even though more than 50% of the inpatients and outpatients were recorded to have improved and stabilised due to treatment, the cost of delivering secondary level care for patients whom were ART initiated was substantial (Kevany et al., 2009).

From the above, it is apparent that those NGOs that provide HIV/AIDS-related services need to have a competitive advantage to secure ongoing funding via such government initiatives as the NHI, and perhaps via international funding mechanisms, so as to curb the cost of such operations and to remain sustainable. Corporate entrepreneurship (CE), or intrapreneurship, has been widely studied by various scholars, with it having been positively associated with such firm outcomes as growth, profitability and sustainability (Lumpkin & Dess, 1996, 2001; Venter & Urban, 2015; Oosthuizen, 2015). The current study will focus on CE and its dimensions within South African NGOs operating in the

health care sector, particularly in terms of the treatment, research and care of patients infected with HIV/AIDS, or other related diseases.

The study will explore whether CE dimensions are present among such entities. If so, further investigation, via the application of research principles, will be applied to determine whether such dimensions contribute to firm performance. For the purpose of this study, the CE dimensions that will be explored include: (1) risk-taking; (2) autonomy; (3) proactiveness; (4) competitive aggressiveness; and (5) innovativeness. The study will also explore the moderating effects of firm climate on the relationship between the CE dimensions and firm performance. From the results of the study, recommendations and observations for policymakers and NGOs will be articulated. Doing so may enhance their approach towards securing ongoing funding, which may, further result in the entities discovering a solution to remaining sustainable or possibly growing to new heights.

1.2 Theoretical background to the study

This study considers the theoretical findings derived from corporate entrepreneurship, with it taking such key concepts into consideration as entrepreneurial orientation, CE dimensions and firm climate. The concepts are operationalised into variables, so that statistical findings can be drawn. Conclusions can then be suggested to determine whether there is a nexus between the same and the organisations' performance in South African NGOs.

1.2.1. Corporate Entrepreneurship (CE)

According to Morris and Kuratko (2002), CE can be defined as "a term used to describe the entrepreneurial behaviour inside an established organization". Some scholars refer to CE as corporate venturing or intrapreneurship (Hornsby et al., 2002; Zahra, 1991). CE involves individuals, or a group of such, within an established organisation, who think, act and display characteristics that are commonly found in entrepreneurs. Therefore, it is important, for the purpose of this study, to come to an understanding of CE as a concept. Various definitions of CE have been proposed in the literature by various scholars; however, the common theme present in their definitions is that entrepreneurship involves active pursuit, by means of exploration and exploitation of innovation, creation of a new

venture, wealth attainment and opportunity-seeking, among others. Thus, CE implies that the antecedents of the constructs aligned to entrepreneurship are evident within an existing corporate space.

1.2.2. Entrepreneurial Orientation

Entrepreneurial Orientation (EO) is the "processes, practices and decision-making styles of an innovative firm" (Lumpkin & Dess, 1996, as cited in Urban, 2016, p. 23). According to Miller (1983), EO consists of three core dimensions: risk-taking, innovativeness and proactiveness. The dimensions are considered to confirm whether CE exists in South African NGOs within the health sector, where the three core dimensions mentioned above are likely to be evident.

Dess and Lumpkin (2005, p. 147) suggested that EO "refers to the strategy-making practices that businesses use to identify and launch corporate ventures". Therefore, it can be concluded that the presence of activities in an organisation that demonstrates the above three dimensions, equates to an existence of EO within the firm, which proves its inclination towards entrepreneurial activities and behaviour.

Dess and Lumpkin (2005) expand upon the dimensions, by including concepts of autonomy and competitive aggressiveness, and, further, suggest that the organisations that embody CE ideals inherently possess EO and its dimensions, which are important predictors of company growth.

1.2.3. Firm Climate

Over the past years, an extensive amount of research has been conducted on the topic of firm climate. Although this has led to numerous scholars suggesting various definitions for an organisational climate, there is still a lack of consensus regarding a single version being accepted by all. According to Lawthom et al. (2005), a universal definition of organisational climate does not exist. However most, if not all, of the definitions possess two distinct qualities, namely an organisational or firm climate that is both (1) perceptual and (2) descriptive.

James (1982) suggests that, at its core, organisational climate is perceptual and psychological in nature. According to Patterson et al. (2005, p. 380) climate can conceptualized as "as employees' shared perceptions of organizational events, practices, and procedures". Climate, therefore, has to do with the perceptions of individuals regarding the manner in which their place of work is managed, and how effectively they and their colleagues work together on a job (Oosthuizen, 2015).

Spinelli and Adams (2012, as cited in Oosthuizen, 2015) argued that an organisational climate is a critical element, in terms of how well the organisation deals with growth, whether it is a new venture or an existing company. According to Tagiuri and Litwin (1968), an organisational climate is construed by members of the organisation and influences their attitudes and motivation. Therefore, in the context of this study, the aim was to test the moderating effects that the firm climate had on the relationship between CE dimensions and firm performance.

1.3 Context of the study

In South Africa, there are various NGOs that assist the National Department of Health with the health care demands of the country, particularly in terms of the research, treatment and care of patients affected by HIV/AIDS and related diseases. According to the Statistics South Africa (Stats SA) 2020 midyear population estimates report, "the estimated overall HIV prevalence rate is approximately 13,0% among the South African population. The total number of people living with HIV is estimated at approximately 7,8 million in 2020. For adults aged 15–49 years, an estimated 18,7% of the population is HIV positive" (Statistics South Africa, 2020, p. viii). This is a significant number in relation to the estimated 2020 midyear population of 59.62 million in South Africa, according to Stats SA (2020). The estimate, further, depicts that a significant number of the population who are affected by this virus make up those that are about to enter, and those who are in the prime, of their working years (Stats SA, 2020). One can, thus, assume that a noteworthy number of the economically active population forms part of those affected, hence making the accessing and availability of quality health care all the more important.

From the above statistics, it is evident that there is a great demand for efficient and effective research, treatment and care in the health sector, so as to assist patients with HIV/AIDS and related diseases. Thus, determining whether CE dimensions exist and the impact that the same might have on NGO performance could be greatly beneficial.

In early 2020, a virus known as COVID-19 was reported as being detected, resulting in a global pandemic, according to the World Health Organisation (WHO) (Stats SA, 2020). In South Africa, the first COVID-19 case was recorded on 5 March 2020, with the first recorded death as a result of the virus being recorded on 27 March 2020, according to the Stats SA midyear report for 2020. After considering the age mortality profile of the disease, it was predicted at the time that those countries that, on average, had an older population would be the worst affected by the virus in terms of the number of deaths experienced (Stats SA, 2020). In line with such a prediction, the more developed countries were predicted to become the worst affected by the virus, although they had greater means of meeting the health burden the virus caused (Stats SA, 2020). As a result, the South African government, which was cognisant of the various vulnerabilities and additional burden that the virus was likely to cause, the national health care system, responded by placing the country in lockdown, in an attempt to curb the spread, flatten the curve and allow time for the country's health care system to prepare adequately for the worsened spread of the virus (Stats SA, 2020).

Even though the South African government initiated the lockdown and other strategies, according to the DoH South Africa COVID-19 Online Resource and News Portal, as on 14 February 2021, a total of 8 672 596 people in South Africa had undergone COVID-19 testing, with a total of 1 490 063 having been identified as positive. At the time, a total of 1 385 996 cases were recorded as having recovered, with a total of 47 821 having been reported as having died due to the virus. As such, the impact of the virus on the South African health system, along with that of such viruses as HIV/AIDS, might result in an even greater need for NGOs in the health sector in future to lend their support to the struggle, which could result in greater funding opportunities in future. This research report paper demonstrates how the embodiment of corporate entrepreneurship and its various dimensions can aid in creating a competitive edge, and in securing such opportunities.

1.4 Problem statement

NGOs are considered to be drivers of development in a country - leaders of NPO's are often motivated to start such entities due to a desire to fulfil a social or ideological need (Barnard, 2020). Government depends upon NPOs to fulfil various functions, which they may not be able to fulfil, as these entities are not faced with the same political pressures that government experience (Barnard, 2020). According to Booth (2014, as cited in Barnard, 2020), NPOs rely on external funding from government grants, private foundations and at times, affluent people. As a result, one can deduce that NPOs can place themselves in jeopardy, by being too reliant on such funding mechanisms (Barnard, 2020).

NGOs that operate in the health sector, and particularly those that specialise in HIV treatment and care, remain turbulent, with an over-reliance on the state and international entities as their sources of funding. Due to the recent global economic recession, most donors stopped funding such entities (Davis, 2013, as cited in Kang'ethe & Manomano, 2014), with the effects having been felt particularly by the NGOs specialising in the realm of HIV/AIDS treatment and prevention (Kang'ethe & Manomano, 2014). Although the South African government has committed itself to supporting such NGOs, due to their impactful work, in reality such commitment is not always seen through (Kang'ethe & Manomano, 2014). The unfortunate cuts made in funding have led to some NGOs having to close down their provincial offices, thus affecting the treatment of HIV/AIDS patients (Kang'ethe & Manomano, 2014). Political and bureaucratic circumstances can, at times, determine the funding mechanisms that could drastically shift an NGO financially, resulting in them having to reposition themselves (Barnard, 2020). As such, it is important for NGOs to become adaptable to such an environment.

According to Bantel and Jackson (1989), internal innovation, within companies, can produce competitive survival, with it having the potential to yield a competitive advantage within the global market. Hind and Steyn (2015, p. 69) highlight that "CE is credited for many positive organisational outcomes, including systemic growth and increased revenue". In addition, Covin and Miles (1999, p. 59) note that "corporate entrepreneurship has a positive reputation as a generally effective behavioural phenomenon because the organizational actions associated with this phenomenon can

often be linked to recognized bases of competitive advantage". However, Zahra et al. (2013, p. 368) indicate:

> "These effects might vary under different conditions, such as the types of industries analysed. Given that the factors that influence growth and profitability are different, it remains unclear when the pursuit of CE activities might have different implications for both variables (i.e., profitability and growth)".

Determining the contribution that CE dimensions have on business performance should be considered, as the study of CE dimensions in emerging countries is still novel and deficient (Aktan & Bulut, 2008; Entebang et al., 2006). In addition, there is lack of research on how CE dimensions shape performance in South Africa NGOs, while taking into account such internal organisational factors as the moderating effects of firm climate on the relationship between CE and performance (Shamsuddin et al., 2012), which this study seeks to address.

1.4.1. Main problem

The main problem that the current researcher seeks to explore in this study concerns determining the contribution of corporate entrepreneurial dimensions to firm performance in South African NGOs.

1.4.2. Sub-problems

Sub-problem one is the need to determine the influence of CE dimensions on firm performance.

Sub-problem two is the need to determine the moderating relationship of firm climate on the relationship between the CE dimensions and firm performance.

1.5 The Research Purpose, Research Question and Aims of the Study

The purpose of the current study was to investigate and empirically determine the contribution of CE dimensions on firm performance within South African NGOs in the

health industry, by considering the moderating effects of the organisation's climate on the relationship. The study, further, aimed to add to the body of CE-related knowledge by demonstrating the nexus between CE dimensions and firm performance within a specific industry, like South African NGOs in the health sector, to attempt to address the gaps highlighted by the likes of Zahra et al. (1993), Aktan and Bulut (2008), and Entebang et al, (2006), as mentioned above.

1.6 Conceptual/Theoretical Definition of Terms

Climate refers to "perceptions that individuals have of the way their place of work is managed and how effectively that and their colleagues work together on the job" (Burke & Litwin, 1992, as cited in Oosthuizen, 2015, p. 523).

Corporate entrepreneurship refers to when an individual, or a group of such, in an established company think, act and behave in a manner that is commonly found in individual entrepreneurs (Venter & Urban, 2015). Such a manner includes exploring and exploiting opportunities by being innovative, proactive, and risk-taking in commercialising a product or service to yield various forms of capital (i.e., financial, social, human, etc.).

Entrepreneurial Orientation refers to "firm-level processes, practices and decision-making styles where entrepreneurial behavioural patterns are recurring" (Covin & Slevin 1991, p. 7; Dess & Lumpkin 2005, as cited in Urban, 2016, p. 41; Lumpkin & Dess, 1996 as cited in Urban, 2016, p. 41).

1.7 Contribution of the study

This research study will further advance the theoretical frameworks of CE provided by other scholars, by developing insights into the contributions that CE dimensions have on firm performance, when taking firm climate into consideration as a moderating effect, within the context of South African NGOs in the health sector. In turn, the study seeks to add value to the psychology of entrepreneurship by determining the individual link of CE

dimensions to this environment, when moderated by firm climate and the influence these have on organisational performance.

Early entrepreneurial scholars such as Schumpeter (1934), McClelland and Mac Clelland (1967) examined entrepreneurship with the individual being at the centre, from a psychological approach (Frese & Gielnik, 2014). According to Baron (2007, as cited in Frese & Gielnik, 2014), entrepreneurship consists of a three-stage process which include (1) pre-launch or opportunity recognition stage; (2) resource assembly or launch stage; and (3) post-launch or management stage, wherein psychological aspects at an individual level are considered to be of importance at each stage (Hambrick, 2007, as cited in Frese & Gielnik, 2014). Krauss et al. (2005, as cited in Frese & Gielnik, 2014) went on to form a model of EO, which focused on the entrepreneur from an individual perspective, finding that traits conceptualized to be the same as the five CE dimensions in the context of this study, shaped a distinct personal level factor of EO.

Many NGOs being the drivers of addressing various socio-economic development issues, which, in most cases, are the intervention gaps left by the government, result in their growth and sustainability being of immense importance, particularly in developing countries like South Africa. Therefore, the influence of CE dimensions on such an entity's performance, particularly in terms of on their growth, can provide valuable inferences.

According to Van Rooy (1997, as cited in Klugman, 2000, p. 95), "NGO participation is essential to good policy-making and implementation is widely accepted and has been institutionalised in international agreements". Thus, this study sought to provide important findings that might aid NGOs and other policymakers in determining key interventions that could be included in particular policies, so as to assist such organisations to grow and to remain sustainable, so as to be able to address the much-needed socio-economic gaps left within the South African health sector.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The literature review highlights the findings and the theories proposed by previous research in relation to the state of CE. The CE dimensions, mentioned in the introduction, are a key focus. The impact that the CE dimensions have on firm performance according to previous studies will be explored, along with the inferences of organisation climate, so that its moderating effects can be considered. Table 2.1 below, further, summarises the entrepreneurial phenomena of CE and the organisational climate, in terms of the existing literature.

Thurik and Wennekers (1999) note that CE may impact on company performance and on the growth of the economy. The Global Entrepreneurship Monitor (GEM) report is an international report that measures the total entrepreneurial activity (TEA) across many countries, with it giving insights into each country's economy, demographics, impact, diversity and long-term sustainability (Bosma & Kelley, 2019). The report provides an index for measuring entrepreneurial competitiveness, which is known as the National Entrepreneurship Context Index (NECI), and which ranks economies on 12 indicators of the external environment that can influence entrepreneurship – the report examines the manner in which the 12 indicators have an impact on the TEA, per national economy, and draws explanations per its suggested framework (Bosma & Kelley, 2019). The report also provides the Entrepreneurial Employee Activity (EEA), which refers to:

> the percentage of the adult population aged 18-64 years who, as employees, have been involved in entrepreneurial activities such as developing or launching new goods or services, or setting up a new business unit, a new establishment, or a subsidiary (Herrington & Kew, 2018, p.13).

According to the 2017/2018 GEM report, although South Africa increased its percentage of TEA by 11% from 2016, its EEA only increased by 0.5%, with the report demonstrating that South Africa is ranked low (48th out of 54 economies) in this area (Herrington & Kew, 2018). Therefore, should the EEA percentage increase, so, too, will

the TEA percentage increase, one can deduce, thereby strengthening the South African economy. Various scholars (Oosthuizen, 2015; Hult et al., 2004; Lumpkin & Dess, 1996; Baum et al., 2007; Urban, 2016; Madsen, 2007; Venkatraman, 1989) have attached entrepreneurship with positive relationships to such constructs as innovation, risk-taking, proactiveness, competitive advantage, the creation of new ventures and wealth creation, among others; therefore, it is clear that there is a need to improve on the economy's TEA percentage and, to achieve the same, the EEA percentage has to increase. A strategic solution to achieving this goal is to determine whether CE dimensions are present in an organisation and the contribution that they have, on firm performance in particular, while considering the impact of the firm climate on the relationship.

2.2 Literature Background

2.2.1 Defining Entrepreneurship and an Entrepreneur

The process whereby individuals uncover and takes advantage of opportunities to produce goods and services is considered to be entrepreneurship (Shane & Venkataraman, 2000, as cited in Malebana & Swanepoel, 2015). According to Kaplan and Warren, (2010, as cited in Khoury & Omran, 2012) entrepreneurs have skills and traits rooted in them, which they develop to become successful. Therefore, entrepreneurship is when an individual or group of individuals explores and exploits an opportunity through innovative approaches, taking calculated risks, being proactive in their respective field, exhibiting competitive aggressiveness, and being autonomous in their making of decisions and in their taking of action.

An entrepreneur is an individual that brings transformation to an environment, by creating, taking risks and using technology to obtain profit (Sajjad et al., 2012). Two types of entrepreneurs were conceptualized, namely the Craftsman-Entrepreneur and the Opportunistic-Entrepreneur (Filley & Aldag, 1978, as cited in Alam et al., 2019). Opportunistic Entrepreneurs are typically independent, seek innovative ways to formulate something different from their competitors, and they are more concerned with growing a brand or a particular image (Filley & Aldag, 1978, as cited in Alam et al., 2019). These types of entrepreneurs usually have advanced education, with diversity of experience,

generally in management (Agarwal & Chatterjee, 2007). On the other hand, the Craftsman Entrepreneur is said to be more traditional, in that they are interested in financial dominance, they value and identify business based on its official educational status that is of a formal nature (Filley & Aldag, 1978, as cited in Alam et al., 2019). These entrepreneurs are characteristic of not being highly educated, with most of their experience being in operations as opposed to management, and they tend to lean towards inflexible strategies (Agarwal & Chatterjee, 2007).

An entrepreneur is essentially an individual or group of people who recognize an opportunity, and procures the relevant resources to make the opportunity profitable. They form organisations out of these activities and take ownership and responsibility of the same, thereby creating employment opportunities and wealth, which is part and parcel of entrepreneurship (Carton et al., 1998). In the context of this study, it is important to conceptualize the antecedents of entrepreneurship and that of an entrepreneur, as CE share these characteristics, wherein individuals or groups of people display, and behave in a similar fashion within an established organisation.

2.2.2. Conceptualising CE

Various scholars have sought to define CE from multiple perspectives. For example, according to Sharma and Chrisman (1999, as cited in Oosthuizen, 2015, p. 513), CE can be described as "the creation of a new company or the initiation of renewal or innovation through an individual or group of individuals, within an existing organisation". Ireland et al. (2009, as cited in Oosthuizen, 2015, p. 513) view CE "as a vision-directed, company-wide embrace of entrepreneurial behaviour that recognises and exploits opportunities to renew the company and extend the scope of operations". Zahra and Covin (1995) consider CE to be "widely accepted as an effective business practice to strategically revitalise organisations, enable them to achieve competitive advantage, and improve the commercial performance of the organisations".

In summary, CE occurs when an individual, or a group of individuals, in an established company think, act and behave in a manner that is commonly found in individual entrepreneurs. Such a manner includes exploring and exploiting opportunities by being innovative, proactive, competitively aggressive, and by displaying autonomy and taking

risks to commercialise a product or service, so as to yield various forms of capital. What is of significant interest is that the previous literature highlights that CE is a multidimensional phenomenon, which is evidenced by the above five dimensions (Lumpkin & Dess, 1996, 2001; Sharma & Chrisman, 1999, as cited in Shamsuddin et al., 2012). Due to the lack of research on the influence that CE dimensions can have on the performance of South African NGOs, the current study seeks to provide some relevant answers.

2.2.3. CE Dimensions

According to Miller (1983), organisations that innovate, take risks and those whom are proactive are entrepreneurial in nature. As such, he conceptualised these three dimensions as being related to firm level entrepreneurship (Oosthuizen, 2015). Various scholars propose that CE is comprised of core dimensions, which are the same as the EO dimensions mentioned above (Covin & Selvin 1989, 1991, as cited in Urban, 2016; Kreiser et al., 2002, as cited in Urban, 2016; Lumpkin & Dess 1996, 2001, as cited in Urban, 2016). Dess and Lumpkin (2005) suggested that two further dimensions, namely autonomy and competitive competitiveness are important to the concept of EO and that all five of the dimensions collectively attribute to the decision-making styles and practices of entrepreneurially inclined members of an existing organisation (Oosthuizen, 2015). Lumpkin and Dess (1996, as cited in Otache & Mahmood, 2015), argued that the dimensions of EO differed in their influence or contribution to firm performance on an independent basis, depending on the degree of support the firm's environment and other variables offer in their collaboration with organisational performance (Covin & Wales, 2012, as cited in Otache & Mohammod, 2015).

According to Oosthuizen (2015, p. 516), the dimensions can be described as follows:

- "Innovativeness refers to a company's pursuit of new opportunities and novel solutions – it requires parting with existing technologies and practices and venturing beyond the status quo" (Oosthuizen, 2015, p. 516).

- "Proactiveness refers to a company's efforts to pursue new opportunities, being pioneering and taking initiative to explore and exploit an opportunity" (Oosthuizen, 2015, p. 516).

- "Risk-taking in the context of CE refers to a company's willingness to pursue opportunities, even though an element of uncertainty as to whether an undertaking will be successful" (Oosthuizen, 2015, p. 516).

- Competitive aggressiveness "which involves a company's propensity to challenge its competitors and its efforts to outperform its industry rivals – such behaviour displayed by a firm is characterised by a strong offensive stance and aggressive responses to competitive threats". For example, when a company enters a market with drastically lower prices (Oosthuizen, 2015, p. 516).

- "Autonomy refers to the ability and the will to be self-directed in pursuit of opportunities" (Oosthuizen, 2015, p. 516) – it has to do with the independent action undertaken by entrepreneurial leaders or teams, which is directed at bringing about a new venture and at seeing it through to fruition.

Numerous studies sought to determine the influence of CE or EO on firm performance from a multidimensional perspective, wherein some found positive relationships and others found negative relationships (Otache & Mahmood, 2015). Therefore, for the purposes of this study CE dimensions was examined as a multidimensional construct, consisting of the dimensions of risk-taking, competitive aggressiveness, autonomy, proactiveness and innovativeness, in the context of a South African NGO setting, to determine each dimensions contribution to organisational performance. All five dimensions were chosen for examination so as to determine if inferences of the influence these have on the practices and decision-making styles of existing members of the NGOs are truly of an entrepreneurial nature, which are antecedents of CE.

It is further important to note that in the context of this study CE is being examined in the public sector, given that the study focus is within the NGO arena. According to Hartley (2005), consideration of the roles of policy-makers or advisors, managers and citizens in

the innovation processes is important in this sector. Benington and Hartley (2001, as cited in Hartley, 2005) illustrate three models of governance and public management which they suggest drives and promotes the creation and acceptance of innovation in the above sector. The models are (1) traditional public administration; (2) new public management; and (3) networked governance (Benington & Hartley, 2001, as cited in Hartley, 2005). Hartley (2005) suggests that each of these paradigms co-exist and are competitive with each other, depending on the circumstances or context which politicians and managers are faced with when attempting to determine the appropriate action to bring about governance and service delivery to spark innovation.

The model of traditional public administration provides that innovation is generated and adopted via governance and public administration is a stable context, amongst a homogenous population, to address straight forward problems or needs, defined by professionals in a particular field of expertise, wherein the strategy is focused at the state and producer level – the model further suggests that governance occurs via public servants that are hierarchically placed and focus on public goods (Benington & Hartley, 2001, as cited in Hartley, 2005).

Similarly, the new public management paradigm suggests the same with variance in that such occurs in a competitive context, amongst an atomized population, to address wants expressed by the market, wherein the strategy is focused at the market and customer level, and wherein governance occurs via markets, purchasers, providers, clients and contractors, that focus on public choice (Benington & Hartley, 2001, as cited in Hartley, 2005).

On the other hand, the networked governance model indicates that innovation generation and acceptance occur by means of governance and public administration in a setting wherein continuous changes is experienced, amongst a diverse population, to address complex, unpredictable problems that are prone to risks, wherein the strategy is configured by civil society, and governance occurs via networks, partnerships, and civic leadership, that focus on public value (Benington & Hartley, 2001, as cited in Hartley, 2005).

From the above it would seem that a combination of the new public management and networked governance model would best suit the context of this study, however literature provides that a key criticism of the new public management model is that the same focuses on marketization of the public sector and fails to take the differences between this sector and the private sector into consideration (Hartley et al., 2013). As such a new state was introduced by public administration scholars, known as the neo-Weberian state, which is a model suggested to have a greater potential to bring about innovation then the traditional public administration or new public management paradigms (Drechsler & Kattell 2008–09, as cited in Hartley et al., 2013).

Essentially, this model places a greater emphasis on the entrepreneurial pursuits of public leaders, professionals and managers of the organisation to determine the innovation potential (Hartley et al., 2013). This paradigm regards leadership, managers and frontline employees as key to promote entrepreneurship and in turn to bring about innovation via transformational, post-transformational and distributive leadership (Hartley et al., 2013), which fits the context of this study in terms of the investigation of innovation and its influence on firm performance in a public sector such as SA NGOs.

Kearney et al. (2007), created a model of public sector CE, wherein it is highlighted that key mediating and moderating variables are regarded as important to determine its relationship to CE in the public sector and the contribution these factors have on organisational performance in this sector. In the context of the model proposed by Kearney et al. (2007), CE is depicted as the independent variable via the dimension of innovation, organisational performance is illustrated as the dependent variable represented by the dimensions of growth, development, and productivity. A public sector organisation represented the mediating variable in the context of the above model and the dimensions linked to the same included structure/formalization, risk-taking, decision-making/control, proactivity, culture and reward/motivation. Finally, the model demonstrated that the external environment of organisations in the public sector represented the moderating variable, represented by the following dimensions, (1) political; (2) complexity; (3) munificence; and (4) change.

The above model considers the mediating and moderating variables as antecedents of CE, and as having a director or indirect influence on firm performance in the public sector

(Kearney et al., 2007). According to Kearney et al. (2007), CE significantly and positively influences organisational performance in the public sector. However, investigating the same in the context of their proposed model calls for leadership in the public sector to determine the entrepreneurial methods that results in the different types of CE, which of these types yield superior results, whilst also developing an organisational environment wherein effective CE is encouraged and sustained due to the various and complex interrelationship between the antecedents mentioned above and CE in this sector (Kearney et al., 2007).

The sector of business i.e., public or private, are suggested by some scholars to have noteworthy implications on CE, that need to be identified in order to effectively operationalize entrepreneurial characteristics in an existing business in an attempt to yield positive results (Hartley, 2005; Kearney et al., 2007; Hartley et al., 2013). Although the majority of CE studies have been conducted in the context of the private sector, it is not a phenomenon restricted to this sector only, and has recently been the subject of public administration literature (Kearney et al., 2009). Kearney et al. (2009) provided a comparative analysis of private and public sector entrepreneurship, wherein key difference and similarities were identified. In addition, they further develop the existing public sector model and framework of CE as mentioned above, for an organised process to achieve entrepreneurial pursuits in the public sector.

Kearney et al. (2009) suggest from the implications of their model and comparisons made between the two sectors that leadership require a detailed and suitable environmental scanning procedure in place, that will aid the organisation in identifying environmental changes and how certain entrepreneurial action may become effected. Secondly, they indicate that there needs to be alignment between the internal environment of public sector organisations and their entrepreneurial activities, so that motivation and output are positive - furthermore suggestions are made that in order to achieve the above leadership are to ensure that the relevant controls, structures and decision-making mechanisms are in place within the organisation, so that successful results are obtained from their entrepreneurial action (Kearney et al., 2009). Finally, the above scholars advise that public sector organisations should come up with ways to surmount the external challenges

that they face, and they should be seen as an entrepreneurial organisation, created to bring about value to society (Kearney et al., 2009).

Kearney and Meynhardt (2016) proposed a model for public sector CE Strategy (CES), highlighting that the same was required, as traditional CES was centred around profit generating pursuits, as opposed to public value initiatives, which may be more applicable in such a sector. This public sector model looked at each key variable, along with their associated dimensions which included (1) the external environment (moderating variable); (2) entrepreneurial strategic vision (ESV) (independent variable), EO, firm conditions and individual's behaviour (dimensions of ESV); and (3) types of CE fostered and public value or performance achieved (dependent variable) (Kearney & Meynhardt, 2016). Kearney and Meynhardt (2016) place great stock in the role of leadership and individuals whom operate in the public sector, for the successful implementation of CES – they suggest that leadership need to have a strategic vision centred around CE and have effective evaluation and monitoring systems in place to ensure that the firm mission and goals are being met, which in turn will aid management and individuals in an organisation to recognize opportunities to be exploited.

Kearney and Morris (2015) conducted a study, wherein they examined strategic renewal as a type of entrepreneurship, in the public sector. A key interest of this study was to determine the moderating effect of strategic renewal on the relationship between the external environment and performance in the public sector, whilst also investigating the same between the internal organisation and performance (Kearney & Morris, 2015). In the context of Kearney and Morris, 2015 study a sample of CEOs was drawn from 134 public sector state and semi-public enterprises from the Republic of Ireland, wherein the external environment and internal organisation represented the independent variables via the dimensions of (1) munificence and hostility (external environment) and (2) decision-making and control (internal organisation) and organisation performance represented the dependent variable via the dimensions of growth and development.

The results of the above study illustrated that the external environment by means of munificence and hostility have a positive influence on organisational performance in the above sectors – however, strategic renewal only showed a positive impact in its mediating effect on the relationship between munificence and performance, as a negative

contribution was noted in its relationship between hostility and performance (Kearney & Morris, 2015). Interestingly, the study further revealed that strategic renewal had a positive influence on the relationship between the internal organisation and performance in terms of a dispersed decision-making mechanism and an open control system (Kearney & Morris, 2015).

It is clear that public sector CE has various factors and variables that play a role on its impact on organisational performance, from leadership to environmental elements. Thus, for the purpose of this study, not only were the dimensions of CE investigated in the context of NGOs, but a moderating variable of firm climate represented by the dimension of leadership was also examined as indicated further below. This was included in the investigation to obtain a better picture of the true contributions of CE on firm performance, whilst taking into consideration the moderating effects of leadership on the above relationship in a public sector such as an NGO in SA.

2.3 First hypothesis discussion

2.3.1 Innovativeness

According to Nelson (1993, p. 4), innovation can be defined as a "process by which firms master and put into practice product designs and manufacturing processes that are new to them", whereas Hobday (2005, p. 122) defines innovation "as a product, process or service new to the firm, not only new to the world or marketplace." What is of significant importance is the 'newness' being stressed in the definitions, and that, for innovation to occur, a 'new' process, product or service must be established.

Boyd et al. (2014) expands on the above, stating that an innovation is not merely the creation of a new product or service, but it is also the application of a product in a new way, or in a new context. Therefore, innovation can occur in the following areas: "firm's strategy; product offerings; served markets; internal organization; business model" (Hornsby et al., 2013, p. 939).

Innovation is when an invention (a product, service or process) is used to create value for at least one or more people, which then becomes commercialised, so as to generate

economic value. Innovation integrates science and technology to create a new solution to human problems, thus creating value. Schumpeter (1934, 1942) associates innovation with entrepreneurship and economic growth. According to Hult et al. (2004), innovativeness results in the improved performance of a firm. Lumpkin and Dess (1996) suggest that innovativeness involves the business support of creative processes, new ideas, novelty and experimentation, which may lead to the development of new products, services or technological processes.

It is, therefore, hypothesised:

H1: There is a positive influence of innovativeness on firm performance.

2.4 Second hypothesis discussion

2.4.1 Risk-taking

Kuratko and Welsch (2001, as cited in Oosthuizen, 2015) define risk as the uncertainty that is associated with undertaking an activity to obtain a specific outcome. In the context of CE, an organisation must be risk-taking for it to be perceived as being entrepreneurially oriented (Oosthuizen, 2015). Risk-taking firms are those that respond to the call to be opportunity-driven, and that seek new solutions or ideas to existing products or processes, in the light of possible loss or failure (Oosthuizen, 2015). Caruana et al. (2002) indicate that, without the disposition to take risks, no innovation and opportunities may be present that can easily be exploited. Risk-taking involves committing large amounts of assets or resources toward uncertain ventures, and taking calculated risks (Aloulou & Fayolle, 2005; Lumpkin & Dess, 1996). According to Baum et al. (2007), the effect of the risk-taking tendency on business success is significant and positive, although minor.

The organisations concerned attain new solutions through a process of experimentation and trial-and-error (Oosthuizen, 2015). Possible risks that an organisation may encounter are: (i) business risk (venturing into unchartered markets); (ii) financial risk (opportunity cost); and (iii) personal risk (reputational) (Oosthuizen, 2015). While incremental innovations contain a low level of risk (due to their high likelihood of success), they are also typically low in terms of scientific novelty. In contrast, radical innovations (while

possessing advanced levels of scientific novelty) are high-risk (Urban, 2016). It is, therefore, hypothesised:

H2: There is a positive influence of risk-taking on firm performance.

2.5. Third hypothesis discussion

2.5.1 Proactiveness

Proactiveness, in contrast, is the persistence involved in ensuring that enterprises are realised, which involves adapting to, and withstanding, failure (Urban, 2016). This construct infers the making of a progressive interpretation that is connected to the taking of innovative action (Lumpkin & Dess, 1996). Proactive organisations tend to lead, by being the first to introduce new products or services, rather than following other organisations in the market (Rauch et al., 2009). First agents can govern the market by means of dominating the distribution channels concerned, and thereby creating competitive advantage. Madsen (2007) suggests that proactive businesses are typically more sustainable when they are staffed with innovative people, who are willing to take risks.

Organisations that are oriented towards innovation, with a management that proactively responds to environmental changes, are thought to be entrepreneurially imperative. According to Covin and Slevin (1991), an entrepreneurial continuum arranges organisations from less entrepreneurial (conservative) to more entrepreneurial. Use of the entrepreneurial grid in figure 2.1 can serve to aid organisations to define the role of entrepreneurship within their organisations actively. The degree of entrepreneurship can be measured as ranging from conservative (reactive, risk-averse and non-innovative) to entrepreneurial (innovative, risk-taking and proactive).

The entrepreneurial grid measures both the levels of entrepreneurial activities (ranging from incremental to revolutionary) and the levels of frequency of entrepreneurial events (ranging from periodic to continuous). According to Morris et al. (2008), various internal and external factors impact on where an organisation may fall on the grid.

The literature supports the notion that the greater is the frequency of entrepreneurship, the greater is the degree of entrepreneurship that is evidenced in innovativeness, risk-taking and proactiveness, as is illustrated in figure 2.1 below. Therefore, for the purpose of the current study, an interesting finding would have been to determine where, on the entrepreneurial grid, those NGOs that showed the characteristics of CE dimensions, and what influence the same had on the organisations' performance. It is, therefore, hypothesised:

H3: There is a positive influence of proactiveness on firm performance.

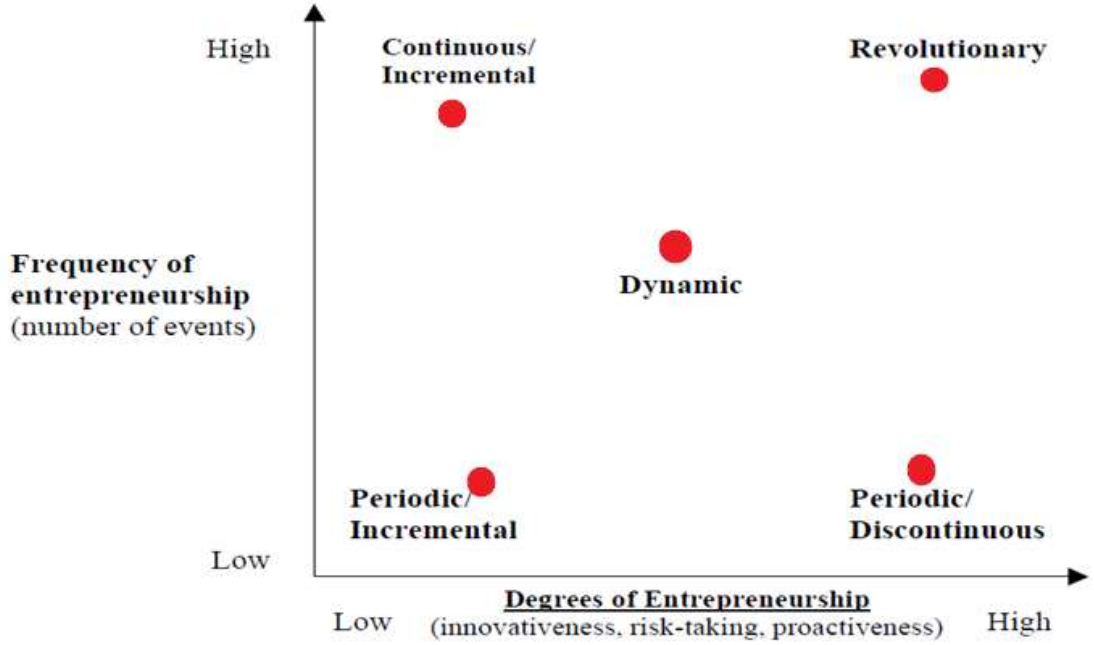


Figure 2.1: The entrepreneurial grid

Source: Morris et al., 2008.

2.6. Fourth and Fifth Hypothesis Discussion

2.6.1. Competitive Aggressiveness and Autonomy

Competitive aggressiveness and autonomy have been considered by multiple scholars in the literature to be additions to the EO dimensions, as various studies demonstrate that

the presence of such dimensions equates to a firm's or individual's alignment to entrepreneurial behaviour or mindset. According to Hambrick (1995 as cited in Linyiru & Ketyenya, 2017), competitive aggressiveness is a firm's tendency to respond aggressively to the competition, by means of attempting to obtain competitive advantage over its competitors, and, in doing so, displaying a dominating response. Similarly, Lumpkin and Dess (2001) categorise competitive aggressiveness as a firm's response to threats. Venkatraman (1989) suggested that competitive aggressiveness is when a firm positions itself, by means of resource allocation, so as to gain leverage in a specific market faster than its competitors. Some behaviour that can be evidenced to correlate to competitive aggressiveness includes, but is not limited to, product innovation, market development and a high degree investment, set on improving market burn.

In addition to the above, Covin and Covin (1990) highlight that competitive aggressiveness is evident when evaluating management attitudes towards competitiveness, whereas Lumpkin and Dess (1996) suggest that competitive aggressive is evidenced by the use of non-conventional competition methods, instead of traditional, or reliable, ones. Due to business environments being of a turbulent nature, firms tend to become increasingly entrepreneurial, so as to be able to compete and achieve competitive advantage. As such, it is suggested that the competitive aggressiveness of a firm leads to heightened firm performance, which is considered to be an entrepreneurial antecedent, so as to be able to improve their position on the market (Rauch et al., 2009).

A common perspective amongst scholars is that exorbitant degrees of autonomy is required for corporate entrepreneurial ventures in order to foster new businesses successfully (Kuratko et al., 2009, as cited in Gard, 2015). However, there seems to be a limitation on the understanding of the dimensions of autonomy amongst CE scholars (Birkinshaw & Hill, 2005, as cited in Gard, 2015; Crockett et al., 2013, as cited in Gard, 2015). Brock (2003) indicates that autonomy is complex, consisting of multiple dimensions.

For the purpose of the current study, autonomy can be seen as consisting of the individuals, or the groups of individuals, in an existing organisation, who are motivated to act or to behave independently, in the pursuit of entrepreneurial activities (Venter & Urban, 2015). A study, conducted by Gard et al. (2013), sought to clarify the

multidimensional phenomenon of autonomy, so as to determine the successfulness of teams developing new business in small and medium-sized highly technological firms (SMEs). The scholars concerned previously proposed that autonomy can be described in terms of four dimensions: functional autonomy; decision autonomy; structural autonomy; and strategic autonomy (Gard et al., 2013). Their study revealed the existence of a positive relationship between the four different autonomy dimensions and firm performance, while taking functional importance as a moderating variable (Gard et al., 2013). It is, therefore, hypothesised:

H4: There is a positive influence of competitive aggressiveness on firm performance.

H5: There is a positive influence of autonomy on firm performance.

2.7. The Potential Contribution of CE Dimensions on Firm Performance

Bolton and Lane (2012) propose that, the greater the EO or CE dimension score, the more enhanced is the performance of the organisation concerned. Lumpkin et al. (2010) found positive relationships between business performance and the five CE dimensions. Although the literature defines performance as a multidimensional concept, for the purpose of the current study, perceived firm performances will be measured by the amount of business growth experienced. Literature supports the notion that CE dimensions positively influences organisational performance, as evident in the study conducted by Otache and Mahmood (2015). The study examined the association of EO dimensions with the organisational performance of Nigerian banks - it further examined the mediating results of teamwork on the above relationship (Otache & Mahmood, 2015). In the context of the above study, the EO dimensions was conceptualized as innovativeness, proactiveness, competitive aggressiveness, risk-taking and autonomy (Otache & Mahmood, 2015).

Firm performance was measured subjectively, through the dimensions of profitability, market share and return on assets, whereas teamwork was investigated by means of the perceived team dynamic of the banks staff - 297 bank managers completed self-report questionnaires in order to obtain the necessary data for analysis (Otache & Mahmood,

2015). The study demonstrated a significant and positive relationship between EO and firm performance - teamwork positively mediated this relationship, which suggests that when employees work well together in a team, EO's influence on organisational performance is larger (Otache & Mahmood, 2015).

Van der Merwe and Malan (2013), investigated the impact of EO on the perceived success of public secondary schools. The study depicted EO as a dependent variable, consisting of five dimensions, namely autonomy, opportunity utilisation, innovativeness and competitive aggressiveness, to determine their influence on the success of public schools, with succuss being illustrated as four dependent variables, such as learner achievement, strategic intent, effective learning environment and staff development (Van der Merwe & Malan, 2013). Data was collected from five well operating public secondary schools, wherein 313 valid questionnaires were sourced for data analysis - results indicated that autonomy positively influences effective learning environment, whilst competitive aggressiveness positively influenced learner achievement (Van der Merwe & Malan, 2013). Furthermore, the study revealed that there was no substantial relationship between any of the success variables and risk-taking (Van der Merwe & Malan, 2013).

Abuya (2016), conducted a study that investigated the relationship between EO and performance of commercial banks in Kenya. In the study, the heads of departments of research and development, as well as business development from the head offices of the banks were requested to participate (Abuya, 2016). A descriptive sample survey was the method taken and the data was collected using questionnaires, which was then analysed (Abuya, 2016). In the context of this study, EO was conceptualized as being multidimensional consisting of risk-taking, autonomy, innovativeness, competitive aggressiveness and proactiveness (Abuya, 2016). Performance of the bank was measured by dimensions of profit and non-performing loans - key findings of the study revealed that the respondents perceived the increase in profits of the bank being attributed to EO action, along with the decrease in the amount of non-performing loans (Abuya, 2016).

Additionally, the study found that respondents further perceived the accomplishments of their bank to be linked with EO strategies which was applied to their services, procedures, products and processes - as a result of these findings the study recommended that the banks should foster an environment wherein employees are encouraged to innovate in

their operations, in order to gain a competitive edge, which could lead to better performance in terms of profits and expansion (Abuya, 2016). Although, in the traditional sense, business growth is measured in terms of growth in sales, profit, market share, an enhanced competitive position in the market and the job satisfaction of employees (Venter, 2014), for the purposes of the current study, business growth will be measured by the number of new donor grants awarded, the number of new employees hired, the number of new facilities/sites/offices opened, and the firm's competitive position. The rationale for the above is due to the context in which NGOs operate, with their primary goal not being for profit, market share or growth in sales, among other financial goals, but, rather, socio-economic development in their country of operation (Kang'ethe & Manomano, 2014).

According to Yamada and Eshima (2009 as cited in Venter 2014), business growth can be measured by considering the dimensions of EO, which is a positive dimension of firm performance. However, literature provides that not all CE dimensions are positively correlated to a dimension of business performance. For example, in a study conducted by Behram and Özdemirci (2014), which investigated the influence of firm culture and environmental circumstances on CE, and the mediating influence of CE on the above two constructs, along with business performance - the study demonstrated that not all the dimensions of CE examined were positively correlated to business performance of the sample firms involved.

The study revealed that proactiveness had a negative influence on market share and financial performance (Behram & Özdemirci, 2014). The context and environment of the sample firms further revealed some key insights that contributed to the negative findings, such as some making proactive attempts in spite of having financial difficulties or a loss of market shares and innovativeness along with proactiveness being negatively affected by munificence (Behram & Özdemirci, 2014). Such an awareness highlights the fact that the testing of CE dimensions in a particular context and environment is of relevance, so as to be able to confirm whether the same truly contributes to firm performance in a positive or negative manner.

In the present instance, the South African NGO environment and context might reveal interesting results, which might aid policymakers and the NGO executives in making

strategic decisions for the improvement of their organisation's growth and sustainability, so as to drive its socio-economic mission. Due to the lack of empirical evidence on the dimensions of CE in developing countries (Aktan & Bulut, 2008; Antoncic & Scarlet, 2008; Entebang et al., 2006), particularly in the context of the NGO environments surveyed, performance impacts can be discovered, with such a possibility having been a key motivation for the current study.

2.8. Six to Ten hypotheses discussion

2.8.1. ***Leadership, a dimension of firm climate***

Pritchard and Karasick (1973, as cited in Suandi et al., 2014), suggests that firm climate are distinguishing characteristics of a firm, which separates them from other organisations - such characteristics can include the conduct of members of the firm, that are accepted and recognised, and which are the basis for the assessment of a situation as the driver for the manner in which the organisation and its members behave or act. They further consider organisational climate to be driven by its members, particularly by the top management of a firm, as a result of their behaviours and implemented policies, which define the internal environment of the company, and which distinguish it from other organisations (Pritchard & Karasick 1973, as cited in Suandi et al., 2014). They go on to suggest that, as a result of the above, perceptions are created by other members of the firm, which then influences how such members interpret situations and drive behaviour (Pritchard & Karasick 1973, as cited in Suandi et al., 2014).

Castro and Martin (2010, as cited in Suandi et al., 2014), considered firm climate to be common beliefs, feelings and attitudes of the associates of the company, which fosters the fundamental values and norms that encourages the type of attitude of the people in the firm. Therefore, the organisational climate has its roots in the perceptions of individual members of a company, which are reinforced by the policies, practices and characteristics of the organisation's management team, with the collective perceptions having potential behavioural consequences, which distinguish a particular organisation from others. It is important to note that, for the purpose of this study, the firm climate has the potential to

influence either the positive or the negative behaviour of its members, as suggested by Gerber (2003) and Moran and Volkwein (1992).

From the above, it is evident that the definition of firm climate is diverse and has been well-studied by the previous researchers. The literature further supports the notion that the dimensions of organisational climate are just as diverse, as a variety of researchers have used varying dimensions to measure the same. According to Litwin and Stringer (1968), the firm climate consists of nine dimensions, as follows:

- Structure: This dimension is "the perceived limitations of the task situation, the amount of detailed information available and constraints placed on behaviour" (Litwin & Stringer, 1968, p. 47). Essentially, it looks at how the employees feel about organisational rules, policies, processes, procedures and constraints. The organisation can be perceived as having set processes and procedures that must be followed, or as being relaxed, without numerous processes and procedures required to get things done. Argyris (1964) suggests that firms with ridged organisational structure are inclined to create a climate that is categorised by the employees taking fewer risks and being compliant and less independent, which could contribute to less effective decision-making.

- Responsibility: This dimension refers to a feeling of one being one's own boss, having some amount of authority over one's job, and of being able to make independent decisions related to one's job without having to verify the same with a manager or supervisor. The above includes knowing what one's role involves, and ensuring that the work gets done. The literature suggests that, when a person has a sense of ownership of their job, they tend to develop a positive attitude towards it (Litwin & Stringer, 1968).

- Reward: This dimension deals with how employees perceive being rewarded for the work that they do. The stress is on positive reinforcement and the perception of fairness in relation to remuneration or other forms of recognition (Litwin & Stringer, 1968).

- Risk: This dimension focuses on the firm members' perception of the potential risks or challenges related to a particular job, along with their perception of the organisation's general approach to taking risks, namely to whether the organisation is viewed as being high or low risk-taking (Litwin & Stringer, 1968).

- Warmth: This dimension considers the manner in which the firm is perceived by its employees as being friendly and as having good fellowship within its different workgroups. This dimension places value on the perceptions of a firm as being an accommodative and friendly environment, which is considered to yield positive behaviour (Litwin & Stringer, 1968).

- Support: This dimension focuses on how the employees perceive their manager's and colleagues' readiness to assist and to provide support, when such is required of them (Litwin & Stringer, 1968).

- Standards: The emphasis in relation to this dimension is on the members' perception of the attaining of set goals and the meeting of standards, while doing exceptional work (Litwin & Stringer, 1968).

- Conflict: This dimension represents the perceived manner in which managers and employees openly discuss issues or concerns upon which they might not agree, rather than avoiding such topics. Considering alternate points of view on a particular matter that has created the conflict is also considered (Litwin & Stringer, 1968).

- Identity: This dimension explores the degree to which employees perceive being valued in the group and as part of the organisation (Litwin & Stringer, 1968).

A study conducted by Davidson (2000), sought to examine the contribution of firm climate on the performance of hotels in Queensland, Australia. The data was collected and analysed from 14 four to five-star hotels in the above-mentioned area, wherein staff perception of client gratification was examined as both a dimension of performance, as a dependent variable and as a mediating variable between firm climate and financial performance - the dimension of financial performance in the study was conceptualized by the income per available room (Davidson, 2000). Organisational climate, which in the

context of this study represented the independent variable was conceptualized as a multi-dimensional construct, made up of 7 key dimensions namely, (1) professional and organisational esprit; (2) workgroup cooperation, warmth and friendliness; (3) leader facilitation and support; (4) conflict and ambiguity; (5) job variety, challenge and autonomy; (6) job standards and (7) regulations, organisation and pressure (Davidson, 2000). The measuring tool used to investigate these dimensions of firm climate was a variation to that offered by Ryder and Southey (1990, as cited in Davidson, 2000), which itself was a modified version of the Jones and James (1979, as cited in Davidson, 2000) psychological climate questionnaire.

The study found a poor significance of staff demographic variables having an impact on firm climate - it further found that organisational climate had a poor level of influence on client satisfaction (Davidson, 2000). However key findings of the study highlighted that organisational climate had a small but significant variation in staff perception of client gratification, and staff perception of client satisfaction had a small but significant variation in income per available room between hotels (Davidson, 2000). One of the recommendations of the study was to increase further hotels with a greater diversity of star ratings, as the landscape or environment of the organisation is suggested to have an influence on the firm climate, which in turn may impact performance (Davidson, 2000). For the purpose of this paper, it is important to note that in the context of Davidson (2000) study one of the dimensions of organisation climate represented by leadership facilitation and support was confirmed to be a factor that determined organisational climate – furthermore the study highlighted that effect management protocols and principles can improve firm climate, thereby illustrating the significance of leadership.

From a South African perspective, the work environment remains volatile, particularly in the NGO arena, due to a number of reasons, such as funding challenges, corruption and the embezzlement of funds, lack of government support, and inadequate competence levels, among others (Kang'ethe & Manomano, 2014). As a result of the above, frequent changes may occur in one's work environment, which may include organisation restricting, outsourcing to non-core departments and others. Suliman and Abdullah (2005) indicate that a major hurdle that is faced by organisations entails managing work teams in such turbulent environments, with the same making it difficult to create a firm climate

in which employees can succeed and apply their expertise. Therefore, one can deduce that from the above literature, support and leadership are key factors in shaping an organisations climate, which is postulated by some scholars (Litwin & Stringer, 1968; Davidson, 2000) to be dimensions of the same. As indicated in section 2.2.3 of this paper previous scholars have highlighted the importance of leadership or top management in the public sector, and their roles in the initiation of CE (Kearney et al., 2009; Hartley et al., 2013; Kearney & Meynhardt, 2016).

For the purpose of the current study, and so as to effectively operationalise the moderating variable of firm climate, the dimension of leadership will be measured, so as to consider its moderating effect on the relationship between CE dimensions and firm performance in South African NGOs. This dimension was taken from a study conducted by Castro (2008), in which the relationship between organisation climate and employee satisfaction in a South African information and technology industry was explored. The researcher concerned approached an external consulting company that specialised in undertaking organisational climate surveys, so as to develop appropriate dimensions (Castro, 2008). As such, the leadership dimension was created, which refers to "the ability of managers to manage and lead employees, how they behave and treat employees and their knowledge" (Castro, 2008, p. 58). It is, therefore, hypothesised:

H6: Firm climate positively moderates the relationship between innovativeness and firm performance.

H7: Firm climate positively moderates the relationship between risk-taking and firm performance.

H8: Firm climate positively moderates the relationship between proactiveness and firm performance.

H9: Firm climate positively moderates the relationship between competitive aggressiveness and firm performance.

H10: Firm climate positively moderates the relationship between autonomy and firm performance.

Table 2.1: Summary of the entrepreneurial phenomena of CE and organisational climate from the existing literature

Author(s)	Focal Entrepreneurial Phenomenon	Locus of Entrepreneurship	Relationship between Entrepreneurship Phenomenon and Strategy
Morris & Kuratko (2002); Zahra (1991); Hornsby et al. (2002); Dess & Lumpkin (2005); Oosthuizen (2015); Zahra & Covin (1995); Covin & Miles (1999)	Corporate entrepreneurship (CE)	Top, senior, middle and junior management	Corporate entrepreneurship leads to competitive advantage and high performance.

Lumpkin & Dess (1996; 2001); Nelson (1993); Hobday (2005); Oosthuizen (2015); Venter & Urban (2015); Covin & Slevin (1991); Morris et al., (2008); Linyiru & Ketyenya (2017); Venkatraman (1989); Covin & Covin (1990); Schumpeter (1934, 1942); Hult et al. (2004); Caruana et al. (2002); Aloulou & Fayolle, 2005; Baum et al. (2007); Urban (2016); Rauch et al. (2009); Madsen (2007); Bolton & Lane (2012); Lumpkin et al. (2010); Bantel & Jackson (1989); Hird & Steyn (2015); Covin & Miles (1999)	CE dimensions: Risk-taking Autonomy Innovativeness Competitive Aggressiveness Proactiveness	Top, senior, middle and junior management	The presence of CE dimensions leads to improved or greater firm performance.

Author(s)	Focal Entrepreneurial Phenomenon	Locus of Entrepreneurship	Relationship between Entrepreneurship Phenomenon and Strategy
Oosthuizen (2015); Gerber (2003); Moran & Volkwein (1992); Litwin & Stringer (1968); Argyris (1964); Suliman & Abdullah (2005); Castro (2008); James (1982); Tagiuri & Litwin (1968)	Firm climate	Top, senior, middle and junior management	Firm climate has a moderating effect on the relationship between CE dimensions and firm performance.

2.9. Conceptual framework of hypotheses

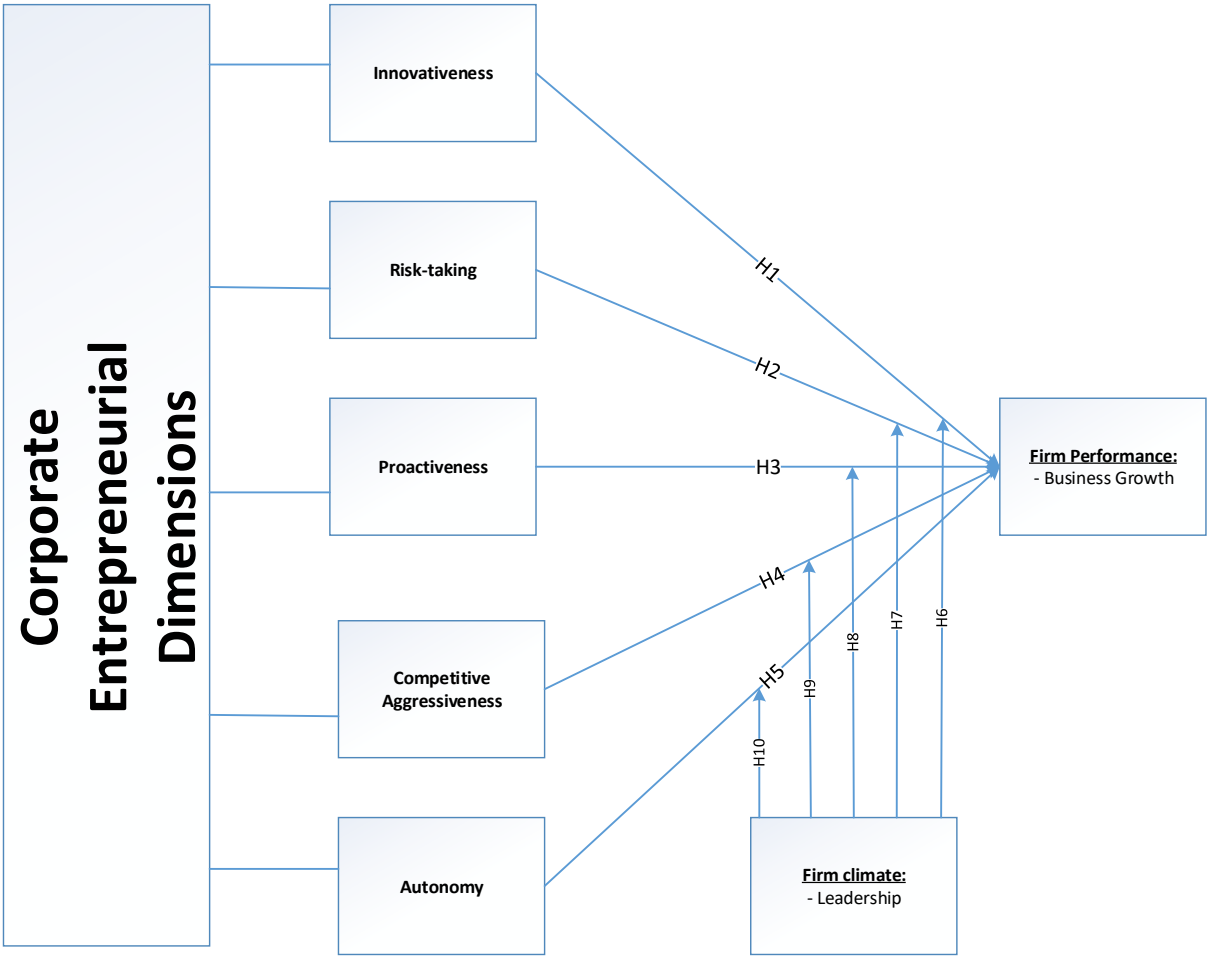


Figure 2.2: Study conceptual model

Source: Lumpkin & Dess, 1996; 2001; Dess & Lumpkin, 2005; Litwin & Stringer, 1968; Davidson, 2000; Oosthuizen, 2015; Castro, 2008; Venter & Urban, 2015; Venter, 2014; Sole, 2018; Nelson, 1993; Hobday, 2005; Schumpeter, 1934; 1942.

2.10. Conclusion of the Literature Review

The literature review demonstrates that CE has been extensively researched, so as to determine its influence on organisational performance. The majority of the findings indicate that there is a positive influence on firm performance, when CE dimensions are displayed in a company. However, related research, in a developing country like South Africa, is still in its infancy. Furthermore, it is evident that the context and the environment of an organisation can impact on whether CE dimensions are fostered, and on the influence that they may have on performance. For the purpose of the present study, the context and the environment that will be investigated in relation to CE dimensions and in relation to the contributions made to firm performance is South African NGOs in the health sector, which provide HIV/AIDS research, treatment and care.

From the analysis of the 2017/2018 GEM report, it is evident that, should the EEA percentage increase, so, too, will the TEA percentage, thereby strengthening the South African economy. A strategic solution for achieving such a goal lies in determining whether CE dimensions are promoted within an organisation, and the contribution that they make to firm performance, while considering the impact of firm climate on this relationship. In the given context, the above will be investigated in terms of the South African NGO environment.

Organisational climate, as a multidimensional construct, is suggested as having an influence on the individual's behaviour in an organisation (Litwin & Stringer, 1968; Davidson, 2000). The organisational climate stems from the perception of individual members of a company, which is reinforced by the policies, practices and characteristics of the organisation's management team, with the collective perceptions having potential behavioural consequences (Suandi et al., 2014). Therefore, logic dictates that the organisational climate may have the potential, either positively or negatively, to influence the internal employees' behaviour in an organisation. For the purpose of the current research report, an investigation was conducted into determining the moderating influence existing between the relationship of CE dimensions and organisational performance, in the context of South African NGOs, whose niche operations lay in the field of HIV/AIDS care. To operationalise the construct, the dimension of leadership was investigated, as the literature supports the notion that leadership in an organisation has a

key influence on the type of climate created there (Davidson, 2000). For the context of the current research report, it is hypothesised that leadership positively moderates the relationship between CE dimensions and firm performance.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Research Methodology

This chapter describes the research methodology that was implemented to investigate the hypotheses indicated in chapter 2. The description entails a discussion on the research approach and design used, as well as descriptions of the population, sample, research instrument, procedures used for data collection, data analysis and ethical considerations.

3.2 Research Design

According to Creswel and Creswell (2018), quantitative research is a type of research style that is applied to explain a phenomenon by way of collecting numerical data that is analysed using mathematical methods like statistics. Quantitative research attempts to increase the objectivity, generalisability and replicability of the research findings involved (Harwell, 2011).

As such, a quantitative research technique was used in the current study, as the researcher proposed to measure the relationships, as well as the predictions, existing between two or more constructs. The hypothesis and theory testing are relevant to the specific study; therefore, a quantitative research design was regarded as being the best option available. According to Blaikie (2009), examples of quantitative data collection methods include questionnaires and structured interviews. For the purpose of this study, questionnaires were utilised with the aim of determining the presence of CE dimensions in South African NGOs, and their influence on performance. Additionally, the questionnaires sourced the appropriate data in terms of the moderating effects that the firm climate has on the relationship between CE dimensions and performance, in the context of the NGOs.

The study further used a quantitative approach to allow for the application of a cross-sectional research design. A cross-sectional research design “addresses our need to document facts at a single moment in time” (Ruane, 2005, p. 93). Such a design “obtains information from a single group of respondents at a single point in time without any attempt to follow-up over time” (Ruane, 2005, p. 93). Such was evident in the use of

statistics to analyse the data. The advantage of conducting a cross-sectional analysis is the access that it grants to the available data, with it allowing for the study to be completed within a limited timeframe, at minimal cost, and with minimisation of error sources as a result of changes over time (Schindler, 2019). However, the disadvantage of the same is that the findings might not be consistent, as the employees may lack knowledge of the field of study, or possess individual bias and subjectivity, which can create observations that do not truly reflect the state of certain constructs.

In the current study, the statistical relationships between the CE dimension and firm performance, as hypothesised in chapter 2, was investigated. In addition, as the moderating effects of firm climate on the relationship between the CE dimensions and performance was explored, a quantitative research methodology was found to be the most appropriate approach for use.

3.3 Population and Sample

3.3.1 Population

The target population are "those people, events, or records that contain the desired information for the study that determine whether a sample or a census should be selected" (Cooper & Schindler, 2014, p. 667). Therefore, the relevant target population consisted of employees of three NGOs, namely Right to Care, the Clinical HIV Research Unit (CHRU) and the Health Economics and Epidemiology Research Office (HE2RO), that were based in Gauteng, and who occupied top, senior, middle and junior level managerial positions within these entities, which equated to a population of 288, based on the human resource records of the above three NGOs.

In the South African context, the term 'non-governmental organisations' is used interchangeably with the term 'non-profit organisations' (NPOs) (Kang'ethe & Manomano, 2014). As per the definition provided in the Non-profit Organisations Act 71 of 1997 (p. 2) (NPO Act), an NPO is defined as "a trust, a company or other association of persons established for a public purpose and the income and property of which are not distributable to its members or office bearers except as reasonable compensation for

services rendered". Similarly, the Companies Act 71 of 2008 (p. 28) (Companies Act) defines a non-profit company as being "a) incorporated for a public benefit or other object as required by item 1(1) of Schedule 1; and (b) the income and property of which are not distributable to its incorporators, members, directors, officers or persons related to any of them except to the extent permitted by item 1(3) of Schedule 1". Previous studies highlight that, for the standardisation of analysis, a study has to focus on entities that possess a comparable organisational setup and that function in a similar industry (Chiva & Alegre, 2009, as cited in Gaffurini, 2015).

The above-mentioned NGOs subscribed to the above definition of the NPO Act and Companies Act, and their niche function is HIV/AIDS research, treatment, care or prevention, wherein funding streams especially donor funding are to be used for the above public purpose. These key criteria all served as a requisite for allowing the above organisations, coined as NGOs to participate in the study.

3.3.2 Sample and sampling method

A sample is "a group of cases, participants, events, or records consisting of a portion of the target population, carefully selected to represent that population" (Cooper & Schindler, 2014, p. 665). A representative sample has the exact same properties as the target population from which it was drawn (Welman, Kruger & Mitchell, 2005). It was not feasible to collect data from an entire target population, due to the limited resources, like trained fieldworkers, transport, finances and time, that were available at the time (Singh, 2007). Therefore, after the target population was identified, a sample was selected that was representative of the population as a whole.

Framing the sample then became applicable, so as to increase the probability of obtaining greater precision in the results, and so as to collect the data efficiently, to access available members of the population, and to minimise the costs involved (Cooper & Schindler, 2014). Malhotra (2007) suggests that a sampling frame is a representation of the sampling elements of the target population. A sampling element refers to the unit of analysis or case in a population. The unit of analysis is the main object that is analysed in a study (Babbie, 2010). Typical units of analysis include individuals, groups, social organisations

and social artefacts (Babbie, 2010). In the present study, employees in management positions were the unit of analysis. The sampling frame was constructed with the help of the three target NGOs selected. Sampling frame error was taken into consideration, as such an error tends to occur when specific sample elements are excluded from the sampling frame, or when the sampling frame is not an accurate representation of the target population concerned (Malhotra, 2007).

The individuals framed in the sample were at the levels of decision-making power, and they were engaged in some form of strategy within their organisations. They might or might have not had a higher education qualification, and they formed part of a particular age and race group. All of the respondents were employed by one of the above-mentioned NGOs, as the aim of the study was to test constructs that had been operationalised into variables that applied to NGOs in the health care sector. The decision to include only management-level employees as part of the study was taken, as they were determined by the researcher to be the key drivers of CE dimensions within the South African NGOs. The organisations concerned were approached to persuade the heads of office to allow their respective staff to participate in the study.

The study conducted used a purposive non-probability sample method, as the sample needed to provide a good representation of the characteristics of the population that it was intended to represent, which is a consideration that lies at the core of accuracy and precision (Cooper & Schindler, 2014). According to Cooper and Schindler (2014, p. 665), sampling is "the process of selecting some elements from a population to represent that population". Non-probability sampling, occurs when the probability of any particular member of the population being chosen to participate in the study is unknown, and the respondents are not selected based on the researcher's personal determination (Struwig & Stead, 2013). Purposive or judgement sampling is a "process in which researchers choose participants arbitrarily for their unique characteristics or their experiences, attitudes, or perceptions" (Cooper & Schindler, 2014, p. 663).

Although non-randomised sampling confines the representativeness of the sample and the likelihood of generalisability of the study (Babbie & Mouton, 2009, as cited in Gaffurini,

2015), in the absence of an NGO/NPO data base that was accessible, and which allowed for identifying the population of NGOs, the judgment sampling method concerned was found to be the most appropriate for operationalising the study. A similar justification was implemented for studies that tested the organisational learning capabilities (OLC) scale in different trades (Camps et al., 2011; Chiva & Alegre, 2009; Chiva et al., 2007, as cited in Gaffurini, 2015) for example OLC in terms of hybrid social enterprises (Gaffurini, 2015).

According to the research literature, a minimum sample size of 100 can be regarded as statistically significant, which allows for a factor analysis to be effective (Potgieter, 2009). Other researchers have suggested that a minimum sample size of 30 cases is sufficient for statistical procedures (De Vos et al., 2002), while Sekaran (2003) argues that the rule of thumb regarding sample size should be applied, with such size ranging between 30 and 500 cases. For non-probability sampling, the size of the sample is suggested to be subject to the rules of thumb, which, according to Kline (2005, as cited in Gau, 2010) proposes that, for the sake of structural equation modelling, "generally simpler models require sample sizes of no less than 100 and more complex ones require a minimum of 200–300 cases". Krejcie and Morgan (1970) developed a guideline for determining the recommended sample sizes for a given population, as illustrated in table 3.1 below.

Table 3.1: A decision guideline for determining sample size (adapted from Krejcie & Morgan, 1970)

N	n	N	n	N	n
10	**10**	**220**	**140**	**1 200**	**291**
15	**14**	**230**	**144**	**1 300**	**297**
20	**19**	**240**	**148**	**1 400**	**302**
25	**24**	**250**	**152**	**1 500**	**306**
30	**28**	**260**	**155**	**1 600**	**310**
35	**32**	**270**	**159**	**1 700**	**313**
40	**36**	**280**	**102**	**1 800**	**317**
45	**40**	**290**	**105**	**1 900**	**320**
50	**44**	**300**	**109**	**2 000**	**322**

55	**48**	**320**	**175**	**2 200**	**327**
60	**52**	**340**	**181**	**2 400**	**331**
65	**56**	**360**	**186**	**2 600**	**335**
70	**59**	**380**	**191**	**2 800**	**338**
75	**63**	**400**	**198**	**3 000**	**341**
80	**66**	**420**	**201**	**2 500**	**346**
85	**70**	**440**	**205**	**4 000**	**351**
90	**73**	**460**	**210**	**4 500**	**354**
95	**76**	**480**	**214**	**5 000**	**357**
100	**80**	**500**	**217**	**6 000**	**361**
110	**86**	**550**	**226**	**7 000**	**364**
120	**92**	**600**	**234**	**8 000**	**367**
130	**97**	**650**	**242**	**9 000**	**368**
140	**103**	**700**	**248**	**10 000**	**370**
150	**108**	**750**	**254**	**15 000**	**375**
160	**113**	**800**	**260**	**20 000**	**377**
170	**118**	**850**	**265**	**30 000**	**379**
180	**123**	**900**	**269**	**40 000**	**380**
190	**127**	**950**	**274**	**50 000**	**381**
200	**132**	**1000**	**278**	**75 000**	**382**
210	**136**	**1100**	**285**	**100 000**	**384**

Note:

N = Population Size; n = Sample Size

Therefore, when taking table 3.1 and other supporting literature above into consideration, a sample size of 103 respondents was aimed for in the context of the current study, based on a total target population of 288. A total of 107 responses were collected from a target sample size of 103. During the data screening process, a total of 41 responses were excluded by the researcher, as 4 of the questionnaires contained no responses, 13 of the participants did not provide their consent, 3 did not respond adequately to key demographic questions that could not have been objectively averaged to predict an appropriate response, and 21 had over 10% of their responses to the questions aligned to the research variables that were omitted. According to Bennett (2001, as cited in Dong & Peng, 2013), over 10% of the missing data should not be recorded, as otherwise the findings might be biased.

As a result of the above, a total of 66 responses were captured for analysis, representing the receipt of a response rate of 64% from a targeted 103 sample size. Babbie (2015) suggests that a response rate of 60% is good, and that 70% is considered to be very good. The response rate of 64% received in the context of this study was, therefore, considered acceptable.

Table 3.2: Sampling of the respondents

Description of the Respondent Type	Number to be Sampled
Top, senior, middle and junior management	103

3.4 The Research Instrument

The research instrument that was employed in the current study was a structured online questionnaire. The questionnaire was a seven-point Likert scale, with closed-ended questions, which were broken down into five sections adapted from Venter (2014), Castro (2008) and Sole (2018). In the questionnaire, Section 1 provides an introduction to the study; section 2 deals with demographic information; and section 3 deals with the scales of CE dimension, in which the items test for innovativeness, risk-taking, proactiveness, competitive aggressiveness and autonomy. Section 4 utilises the scales applied to measure the perceptions of firm performance, in terms of which the items test for business growth, and section 5 measures the perceptions of the organisational climate, in relation to which the items test for the dimension of leadership – the data received in response to section 5 was empirically and statistically used to determine the moderating effects of firm climate on the relationship between CE dimensions and firm performance.

A seven-point Likert scale, measuring the dependent, moderating and independent variables concerned, was deemed to be appropriate, after considering the alternative measurement scales available in the literature. Rensis Likert developed the Likert scale, which is considered to be the common rating scale, and which measures the scale of

agreement (Bhattacharjee, 2012). The advantage of using the seven-point Likert scale is the odd number concerned, which enables the scale to be evenly balanced, whilst retaining a range of positive and negative statements (Neuman, 2000). The scale was used to assess the perception of the questions asked, as posed from strongly disagree (1) to strongly agree (7).

The measuring instrument of Venter (2014) and Castro (2008) was adapted by adding two additional scales of measure to make the same a seven-point Likert scale. The rationale for the above, is that, according to Preston and Coleman (2000), when they conducted a study using a self-administered questionnaire, 149 respondents rated service elements associated with a recently visited store or restaurant on scales that differed only in the number of response categories (ranging from 2 to 11) and on a 101-point scale presented in a different format. On several indices of reliability, validity, and discriminating power, the two-point, three-point, and four-point scales performed relatively poorly, and indices were significantly higher for scales with more response categories, up to about 7.

Therefore, a greater response variety was seen to be the best approach for use in an attempt to obtain quality data.

The scales that were used to measure the CE dimensions of innovativeness, risk-taking and autonomy, along with the firm performance dimension of business growth, were adapted from Venter (2014). The scales used to measure the CE dimensions of proactiveness and competitive aggressive were adapted from Sole (2018), whereas the scales used to measure firm climate in terms of the leadership dimension were adapted from Castro (2008). The scales adapted from the above-mentioned scholars possessed the appropriate reliability and validity of the items that were acceptable.

Some advantages of utilising a questionnaire include the following:

1. Data can be collected, within a relatively short timeframe, from a large sample of the population.
2. The results are quantifiable and can, thus, be analysed statistically.

Some disadvantages include the following:

1. It is believed that some forms of information cannot be understood, such as changes in emotions, behaviour, feelings and others.
2. There is no way to control the participants' bias or subjective feelings towards a topic or towards a body of knowledge on a topic, among others.
3. The interpretation of questions among different individuals may skew their response.

Table 3.3: Measurement instrument

Variables	Constructs	Items	Scales	Sources	Comments on instrument
Independent variable (IV)	Innovativeness	The company regularly introduces new services or products or processes. (Q3.2._1)	"7-point Likert scale": '1=Strongly disagree' to 7='Strongly agree'	Venter (2014)	Exploratory factor analysis (EFA) was used to test validity (Schindler, 2019). Cronbach alpha was used to test reliability across all dimensions, with a score of 0.70 being deemed acceptable (Cronbach, 1951).
		Strong importance is placed on novel and innovative products or services. (Q3.2._2)			
		The number of services or products offered during the past three years has risen. (Q3.2._3)			
		The organisation is repeatedly pursuing new opportunities. (Q3.2._4)			
		Over the past three years, changes in our processes, services and products have been dramatic. (Q3.2._5)			

	Proactiveness	Our company has the tendency of changing the product or service lines. (Q3.4._1)	"7-point Likert scale": '1=Strongly disagree' to 7='Strongly agree'	Sole (2018)	
		My firm regularly responds to actions which the competitors initiates. (Q3.4._2)			
		The company regularly pursues new products or services. (Q3.4._3)			
		My firm is very rarely the first company to introduce new products or services, operating technologies and others. (Q3.4._4)			
	Risk-taking	When faced with uncertain decisions, the company usually adopts a bold position in order to maximise the probability of exploiting opportunities. (Q3.3._1)	"7-point Likert scale": '1=Strongly disagree' to 7='Strongly agree'	Venter (2014)	

		The company has a strong proclivity towards high-risk projects. (Q3.3._2)			
		Due to the turbulent business environment, the company believes that daring, extensive acts are necessary to achieve the business aims. (Q3.3._3)			
		Employees are often stimulated to take calculated risks about new ideas. (Q3.3._4)			
		The term 'risk-taker' is regarded as a positive quality for employees in the organisation. (Q3.3._5)			
	Competitive aggressiveness	Our business is intensely competitive. (Q3.5._1)	"7-point Likert scale": '1=Strongly disagree' to 7='Strongly agree'	Sole (2018)	
		In general, our business takes a bold and aggressive approach when			

		competing. (Q3.5._2)			
		The company successfully adopts an aggressive attitude to fight trends that may jeopardise its survival or competitive advantage. (Q3.5._3)			
		We try to out manoeuvre the competition as best as we can. (Q3.5._4)			
	Autonomy	Employees have enough independence in their job to do their work. (Q3.1._1)	"7-point Likert scale": '1=Strongly disagree' to 7='Strongly agree'	Venter (2014)	
		Employees are motivated to be creative and to try different methods to do their job. (Q3.1._2)			
		Employees are allowed to make decisions without going through complex justification and approval			

		procedures. (Q3.1._3)			
		Employees are stimulated to manage their own work and have flexibility to resolve problems. (Q3.1._4)			
		Employees rarely have to follow the same work procedures while performing tasks from day to day. (Q3.1._5)			
Dependent variable (DV)	Business Growth	The company has experienced growth in terms of the number of new grants awarded over the past five years. (Q4.1._1)	"7-point Likert scale": '1=Strongly disagree' to 7='Strongly agree'	Venter (2014)	
		The company has experienced growth in terms of the number of new staff appointments over the past five years. (Q4.1._2)			
		The organisation has experienced growth in terms of the			

		number of new sites/facilities from which it operates. (Q4.1._3)			
		The competitive position of our business has improved over the past five years. (Q4.1._4)			
Moderating variable (MV)	Firm Climate (Leadership)	Management values the contribution I make. (Q5.1._1)	"7-point Likert scale": '1=Strongly disagree' to 7='Strongly agree'	Castro (2008)	
		The management style of the organisation is generally participative. (Q5.1._2)			
		The management style of the organisation is generally oppressive. (Q5.1._3)			
		My immediate manager demonstrates strong leadership skills. (Q5.1._4)			

		My immediate manager does a good job at "people management", dealing with people who work for him/her. (Q5.1._5)			

3.5 Procedure for Data Collection

Once consent was obtained from the relevant NGOs to conduct the research, the human resources departments at each NGO were used as the points of contact to disseminate the online questionnaires via a web-based tool, known as Qualtrics, on behalf of the researcher. The researcher explained the context of the study and the requirements for the survey via the online questionnaire platform, due to the national lockdown, as a result of the COVID-19 pandemic. Information such as a description of what the study entailed, the purpose of the study, what participation in the study involved, and issues of confidentiality and anonymity were all indicated.

Once the participants agreed to participate in the study, they were each required to fill out the online questionnaire. On completion, the responses to the questionnaires were consolidated and used for data analysis, once the screening of the data was complete, as mentioned in the above. The questionnaires were distributed to the participants for completion during January 2021. The surveys were assigned the closing date of 28 January 2021. The participants were, therefore, given a month in which to complete the online questionnaires, so as to ensure that system and other technical issues did not prevent the completion of the same, and so as to ensure that the participants were given sufficient time in which to complete the surveys, by applying sufficient thought to the exercise.

3.6 Data Analysis and Interpretation

The statistical analysis was conducted by means of using an appropriate statistical program, namely the SPSS Program. The data was downloaded from the Qualtrics platform and imported into SPSS to commence with the data analysis process, once the data was screened, as mentioned in section 3 above, and the unusable data was removed. Those cases in which the unanswered responses formed no more than 10% of the questions relating to the research variables were replaced with the mean scores per item and per case.

The researcher then conducted data summarisation, which entailed the conducting of statistical analysis through the condensing of the data, the illustrating of underlying patterns, the applying of understandable conceptualisations, or the generalising of the sample findings to the population (Burns & Bush, 2010).

Descriptive statistics was used to describe the data collected, then the minimum and maximum of scores was analysed and the data described. Other methods of analysis include working out the mean, the standard deviation, the kurtosis, the skewness and the Cronbach alpha. The skewness was analysed to determine the symmetry of the distribution. The kurtosis was analysed to provide information about the ‘peakedness’ of the distribution.

Analysis was also conducted on the reliability of the questionnaires. Their reliability was analysed by determining the internal consistency of the scale, better known as the Cronbach alpha. Although the Cronbach alpha had to be above 0.70 to be considered reliable, according to Nunnally (1978) and Spector (1997), lower thresholds have been used in previous research. In order to analyse the research questions and the hypotheses, inferential statistics was used.

Factor analysis was conducted as a ‘data reduction’ technique. Such analysis was used to determine and form a smaller number of coherent subscales from a large number of individual scale items. Specifically, exploratory factor analysis was used to test for validity. Results obtained from research that can be generalised to other domains, or not, are called external validity. Multiple regression analysis was carried out to assess the

contribution of the independent variables in relation to the dependent variable. The moderating variable was also tested to determine its influence on the relationship between the independent and dependent variables. To achieve the above, the composite scores of the independent and moderating variables were centred. The centred scores were multiplied to accommodate the collinearity that might have occurred. Multiple regression analysis was then run on the moderating variable, on each independent variable, and on the centred interaction variable that were selected as predictor variables. The dependent variable was selected as an outcome variable, whereupon the test was run.

Inferential statistics, such as the Pearson (r) coefficient correlation, was used to determine whether there was a significant relationship between the variables. A correlation analysis was conducted to describe the strength and direction of the linear relationship between the variables.

3.7 Validity and Reliability of Research

For the purpose of the current study, a questionnaire with multi-item scales, measuring various constructs, was utilised. Therefore, it was important to ensure that the construct, scale and instrument validity, both internal and external, and the reliability were tested. The reduction of measurement error is an objective of validity and reliability testing (Field, 2009).

3.7.1 External validity

External validity refers to the degree to which the results obtained in a research study can be generalised to other contexts (Leedy & Ormrod, 2016; Schindler, 2019). In other words, external validity is used to determine the applicability of the research results to other fields. To ensure that the external validity was mitigated in the present instance, the survey was distributed to the target population of management employees within South African NGOs that operate within the health section, particularly in relation to HIV/AIDS research, treatment or care. The surveys were distributed via Qualtrics (digital survey tool), so as to ensure the anonymity of the research, to alleviate the probability of bias

activity and validity. The significant sample size of 66 respondents ensured a varied valid set of results.

3.7.2 Internal validity

According to Cooper and Schindler (2011), internal validity is the ability of a research instrument to measure what it is intended to measure. Therefore, to ensure that internal validity is maintained, the research instrument used to test the variables emanated from previous research studies that sought to test the same variables in differing fields, with an acceptable Cronbach alpha score.

3.7.3 Reliability

According to Blumberg et al. (2008), reliability refers to the accuracy and precision of the measurement procedure. Reliability also deals with the consistency with which a construct is measured (Bhattacharjee, 2012). Therefore, reliability has to do with whether the results of the study are repeatable (Bryman & Bell, 2007). Schindler (2019) suggests that reliability refers to the extent that a measure supplies consistent results.

In the context of the current study, reliability issues were mitigated by ensuring that (1) the questionnaires were completed at the convenience of the participant; (2) the participants were informed of the time required to complete the survey upfront, which, in turn, was used to minimise the effects of fatigue or of being disturbed; (3) the online questionnaires that were self-administered were utilised; (4) the data captured online in Qualtrics was exported to SPSS, which minimised the human error when handling the data; and (5) the unreliability aligned to the instrument was mitigated by the researcher making use of scales that had been tested in other studies (scales from previous studies with a Cronbach alpha of 0.70 or more were utilised).

3.8 Ethical Considerations

All of the participants in the current study were well informed of their ethical rights throughout the research. The research study did not compromise the morality of any of the participants. No form of deception was practised, and the anonymity of the

participants was ensured at all times, as well as were issues of confidentiality. Their voluntary participation in the study was made openly clear. The contact information of the researcher and supervisor were provided to the respondents. In addition, they were informed that the results of the completed study would be made available upon request. After the data collection was complete, the questionnaires were stored in a secure database with limited access, that was digitally security protected. The relevant consent was obtained from both the NGOs and the participants. The NGOs that participated in the study were provided with a copy of the Wits Business School ethics clearance, protocol number: WBS/BA2396786/157. The researcher ensured that all the sources were referenced appropriately, without exception.

CHAPTER 4: PRESENTATION OF RESULTS

4.1 Introduction

This chapter provides the results of the empirical data that was retrieved, after conducting an in-depth analysis of the same. This chapter will detail the demographic, reliability, factor analysis, multiple regression and other relevant statistical tests results, so as to be able to draw conclusions and to relate them to the hypotheses proposed in chapter 2. Bar graphs, pie charts and empirical data tables will be used to represent the data findings, with a narrative on each to explain the results in detail.

4.2 Demographic profile of respondents

The following graphs, charts and tables provide the demographic profile of the respondents who participated in the study, and whose responses were accepted for analysis.

Table 4.1 below highlights that, of the acceptable responses analysed out of a total of 66, 33 were from men and 33 were from women. The pie chart, given in figure 4.1 below, demonstrates the 50/50 response percentage of men and women received from the managers employed in the 3 NGOs that participated in the study.

Table 4.1: Summary of the gender profile of the participants

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	33	50.0	50.0	50.0
	Male	33	50.0	50.0	100.0
	Total	66	100.0	100.0	

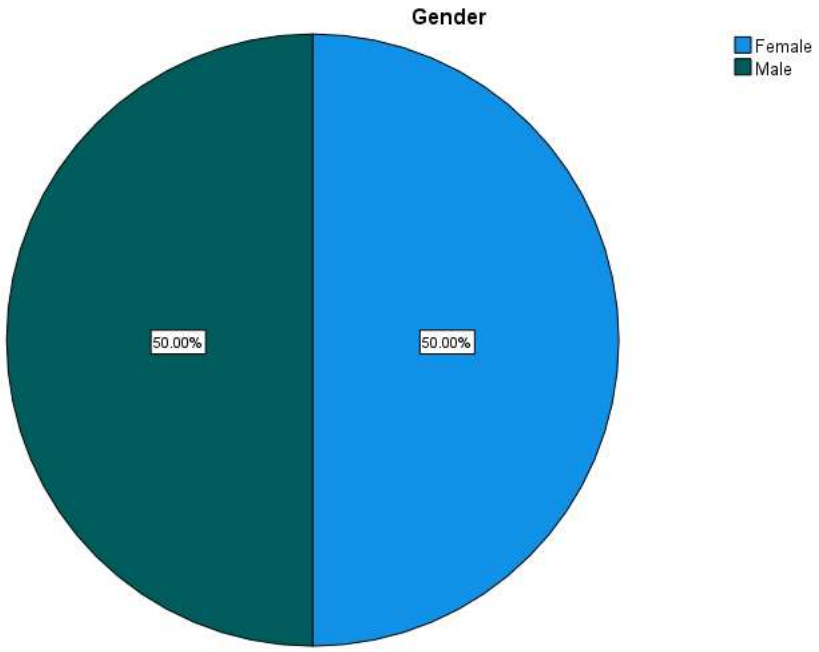


Figure 4.1: Gender composition

Table 4.2 provides a detailed breakdown of the age groups of the participants who participated in the study, demonstrating that those who were between 36 and 45 years old made up the majority, at 40.9%, whereas those between 56 and 65 years old made up the minority, at 10.6%. Those who were between 26 and 35 years old, and those who were between 46 and 55 years old were similar in the amount of participation, with 22.7% and 25.8% participation, respectively. Figure 4.2 visually highlights the percentage differences found within each age group.

Table 4.2: Summary of the age groups of the participants

Age_Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	26 - 35	15	22.7	22.7	22.7
	36 - 45	27	40.9	40.9	63.6
	46 - 55	17	25.8	25.8	89.4
	56 - 65	7	10.6	10.6	100.0

	Total	66	100.0	100.0

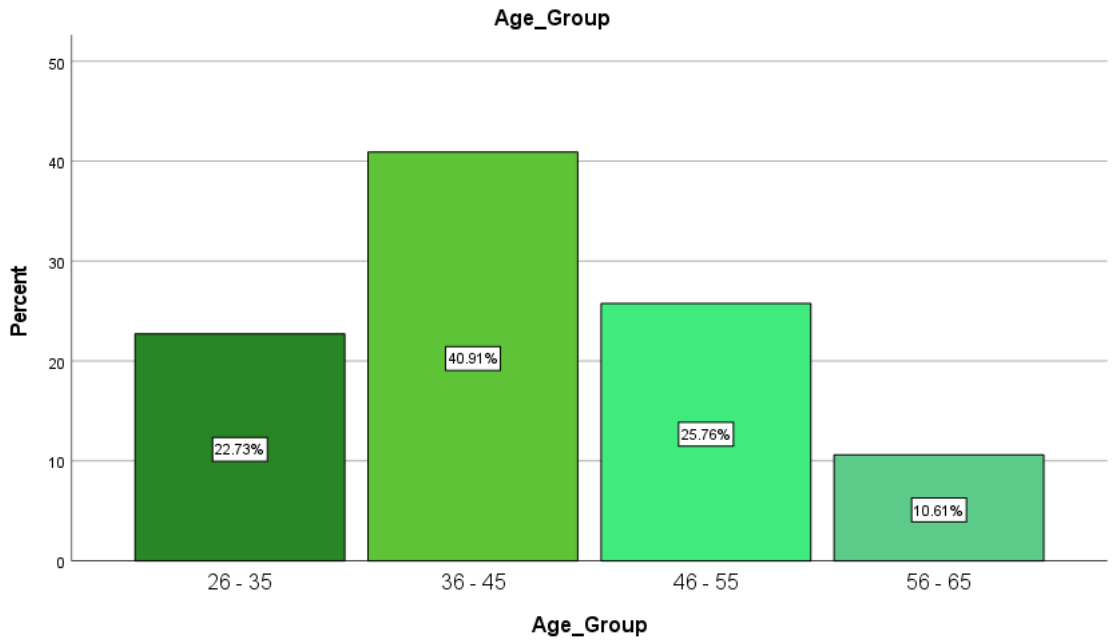


Figure 4.2: Age groups

Table 4.3 highlights that, of the 66 participants, 40 were of African ethnicity, making this ethic group the majority to respond to the study, whereas the coloured participants made up the minority, with only three responses having been received for analysis. Figure 4.3 provides a visual representation of the percentage splits per race group, for ease of reference.

Table 4.3: Ethnic profile of the respondents

Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	African	40	60.6	60.6	60.6
	Coloured	3	4.5	4.5	65.2
	Indian	8	12.1	12.1	77.3
	White	15	22.7	22.7	100.0
	Total	66	100.0	100.0	

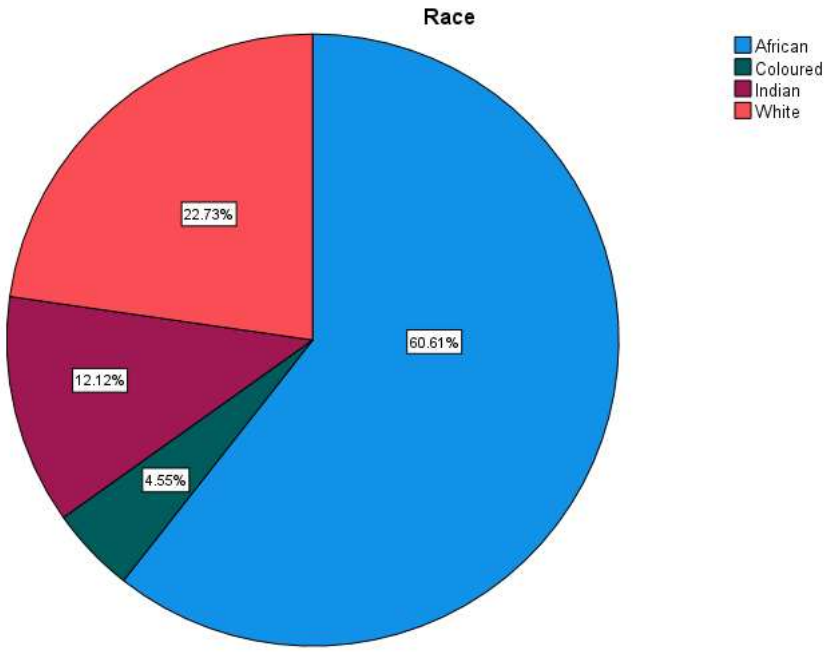


Figure 4.3: Ethic composition of the respondents

As illustrated in Table 4.4. the participants who possessed a bachelor's degree made up the majority response at 17, followed by those with a master's degree, at 15. Table 4.5. depicts that, overall, the majority of the participants occupied middle management positions across all qualification levels, as 24 fell in this category. The lowest number of overall responses was received from the top management or executive level, with a total of 7 overall responses to the study – one can assume that this may be due to there not being a large number of staff within the 3 NGOs surveyed occupying this occupational level. Senior management recorded 18 responses, whilst junior management recorded 17 responses.

Those who possessed a national higher diploma across all the management levels surveyed were in the minority, with a total of three participants. Figure 4.4 below depicts the analysis conducted of the management and the educational levels of the participants who part took in the study, clearly demonstrating that the majority were at senior and middle management levels, holding either bachelor's or master's qualifications.

Table 4.4: Education levels

Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor Degree	17	25.8	25.8	25.8
	Doctoral Degree (PhD)	7	10.6	10.6	36.4
	Grade 12 (Matric)	5	7.6	7.6	43.9
	Honours Degree	12	18.2	18.2	62.1
	Masters Degree	15	22.7	22.7	84.8
	National Diploma	7	10.6	10.6	95.5
	National Higher Diploma	3	4.5	4.5	100.0
	Total	66	100.0	100.0	

Table 4.5: Crosstabulation of management and education levels

Management_Level * Qualification Crosstabulation

Count

		Qualification							Total
		Bachelor Degree	Doctoral Degree (PhD)	Grade 12 (Matric)	Honours Degree	Masters Degree	National Diploma	National Higher Diploma	
Management_Level	Junior management	4	0	3	3	0	5	2	17
	Middle management	7	3	2	4	6	2	0	24
	Senior management	5	1	0	4	7	0	1	18
	Top management	1	3	0	1	2	0	0	7
Total		17	7	5	12	15	7	3	66

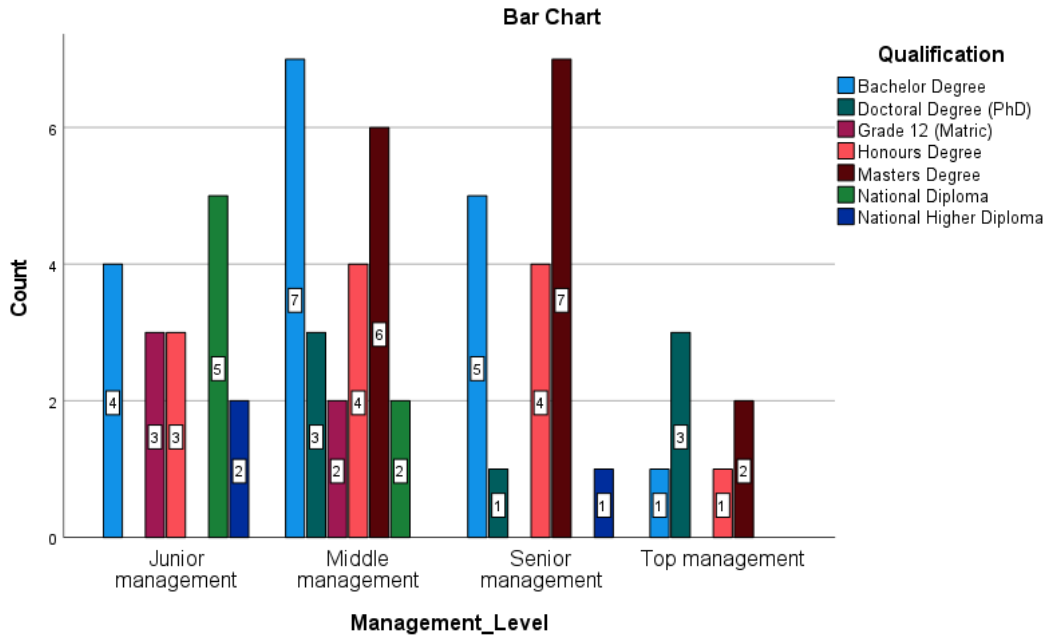


Figure 4.4: Count of participants' education and management levels

4.3. Descriptive Statistics

The descriptive statistics of the dependent, moderating and independent variables are presented in this section. The standard deviation and the mean value from the seven-point Likert scale, which indicated the average level of agreement and disagreement of the respondents, are highlighted.

4.3.1. Autonomy

The descriptive statistics for the items within the autonomy (AUTO) construct as illustrated by table 4.6 indicated that the highest rated item was AUTO01, due a mean score of 5.50, followed by AUTO02 and AUTO004, both with a mean score of 5.38. AUTO05 was the lowest rated item, with a mean score of 4.05. Items AUTO01, AUTO02 and AUTO04 were rated above the midpoint of the scale (midpoint = rating of 4), as the items possessed mean scores slightly above 5. This suggests that a higher tendency of the respondents leaned towards selecting the various degrees of agreement in response to the items concerned. AUTO03 and AUTO05 were rated just above the midrange, as they possessed a mean value that was a little over the midpoint of the scale. This suggests that

more of the respondents leaned towards selecting neutral or agreement responses to the items involved.

Table 4.6: Autonomy – descriptive statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
AUTO01	66	1	7	5.50	1.243
AUTO02	66	1	7	5.38	1.412
AUTO03	66	1	7	4.36	1.742
AUTO04	66	1	7	5.38	1.455
AUTO05	66	1	7	4.05	1.810
Valid N (listwise)	66				

4.3.2. Innovativeness

The descriptive statistics for the items within the innovativeness (INNO) construct as represented by table 4.7 indicated that the highest rated item was INNO04, due a mean score of 6.18, followed by INNO05, with a mean score of 6.17. INNO01 was the lowest rated item, with a mean score of 5.12. All the items were rated above the midpoint of the scale, as the items concerned possessed mean scores above 5. This suggests that more of the respondents leaned towards selecting the various degrees of agreement in response to the items involved.

Table 4.7: Innovativeness – descriptive statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
INNO01	66	1	7	5.12	1.622
INNO02	66	1	7	5.50	1.280
INNO03	66	1	7	5.70	1.381
INNO04	66	2	7	6.18	.910
INNO05	66	1	7	6.17	1.184
Valid N (listwise)	66				

4.3.3. Risk-taking

The descriptive statistics for the items within the risk-taking (RT) construct as shown in table 4.8 indicated that the highest rated item was RT01, due a mean score of 5.29, followed by RT03, with a mean score of 5.05. RT05 was the lowest rated item, with a mean score of 4.58. Items RT02, RT04 and RT05 were rated slightly above the midpoint of scale 4, as the items possessed mean scores of above 4. This suggests that more of the respondents leaned towards selecting neutral or agreement responses to the items concerned. Items RT01 and RT03 were rated above the midpoint of the scale, as the items possessed mean scores of slightly above 5. This suggests that more of the respondents leaned towards selecting the various degrees of agreement in response to the items.

Table 4.8: Risk-taking – descriptive statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
RT01	66	2	7	5.29	1.389
RT02	66	1	7	4.98	1.534
RT03	66	1	7	5.05	1.430
RT04	66	1	7	4.91	1.309
RT05	66	1	7	4.58	1.520
Valid N (listwise)	66				

4.3.4. Proactiveness

The descriptive statistics for the items within the proactiveness (PRO) construct as demonstrated by table 4.9 indicated that the highest rated item was PRO03, due a mean score of 5.62, followed by PRO02, with a mean score of 4.62. PRO04 was the lowest rated item, with a mean score of 2.89. Items PRO01 and PRO02 were rated slightly above the midpoint of the scale, as the items concerned possessed a mean score of just above 4. This suggests that more of the respondents selected neutral or agreement responses to the items. PRO04 was well below the midpoint of the scale, indicating that the respondents typically selected the varying degrees of disagreement in response to the item. PRO03 was rated above the midpoint, with the items containing a mean score of above 5. This

suggests that more of the respondents leaned towards selecting the various degrees of agreement in response to the item concerned.

Table 4.9: Proactiveness – descriptive statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
PRO01	66	1	7	4.50	1.610
PRO02	66	1	7	4.62	1.455
PRO03	66	2	7	5.62	1.237
PRO04	66	1	7	2.89	1.618
Valid N (listwise)	66				

4.3.5. Competitive aggressiveness

The descriptive statistics for the items within the competitive aggressiveness (CA) construct as highlighted by table 4.10 indicated that the highest rated item was CA01, due to a mean score of 5.64, followed by CA02, with a mean score of 5.41. CA03 was the lowest rated item, with a mean score of 4.94 – although this item was rated the lowest, it was above the midpoint of the scale, as the item possessed a mean score of above 4, which suggests that more of the respondents selected neutral or agreement responses to the item. Items CA01, CA02 and CA04 were rated above the midpoint, as the items contained a mean score of above 5. This suggests that more of the respondents leaned towards selecting the various degrees of agreement in response to the items concerned.

Table 4.10: Competitive aggressiveness – descriptive statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CA01	66	1	7	5.64	1.443
CA02	66	1	7	5.41	1.403
CA03	66	1	7	4.94	1.727
CA04	66	1	7	5.24	1.550
Valid N (listwise)	66				

4.3.6. Leadership

The descriptive statistics for the items within the leadership (LS) construct as illustrated by table 4.11 indicated that the highest rated item was LS04, due to the mean score of 5.61, followed by LS01, with a mean score of 5.52. LS03 was the lowest rated item, with a mean score of 2.92. Item LS03 was well below the midpoint of the scale, suggesting that more of the respondents leaning towards selecting the varying degrees of disagreement in response to the item. Items LAS01, LS02, LS04 and LS05 were rated above the midpoint, as the items had a mean score of above 5. This suggests that more of the respondents leaned towards selecting the various degrees of agreement in response to the items concerned.

Table 4.11: Leadership – descriptive statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
LS01	66	1	7	5.52	1.315
LS02	66	1	7	5.34	1.470
LS03	66	1	7	2.92	1.471
LS04	66	1	7	5.61	1.497
LS05	66	1	7	5.45	1.647
Valid N (listwise)	66				

4.3.7. Business growth

The descriptive statistics for the items within the business growth (BG) construct as exemplified by table 4.12 indicated that the highest rated item was BG02, due to a mean score of 6.11, followed by BG04, with a mean score of 5.97. BG01 was the lowest rated item, with a mean score of 5.77. All the items were rated above the midpoint, as they had a mean score of above 5. This suggests that more of the respondents leaned towards selecting the various degrees of agreement in response to the items concerned.

Table 4.12: Business growth – descriptive statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
BG01	66	2	7	5.77	1.213
BG02	66	3	7	6.11	.947
BG03	66	2	7	5.83	1.296
BG04	66	2	7	5.97	1.163
Valid N (listwise)	66				

4.4. Sampling suitability

To determine the sampling adequacy, and whether the items had correlation values appropriate for the conducting of factor analysis, the Keiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity was run. Table 4.13 below illustrates the results of the tests, in that the KMO measuring sample adequacy reported a value of 0.757, which was deemed acceptable, as the value required a minimum score of 0.5 or greater (Nunnally,1978). The Bartlett's test of sphericity run was regarded as being significant, as the result of this test revealed a ρ-value = 0.000 < 0.05, therefore highlighting that the items had correlation scores sufficient for the conducting of factor analysis (Nunnally,1978). Therefore, it was deduced that the sample in the current study was suitable for analysis.

Table 4.13: KMO and Bartlett's test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.757
Bartlett's Test of Sphericity	Approx. Chi-Square	1112.534
	df	300
	Sig.	.000

4.5. Exploratory Factor Analysis (EFA)

The theoretical alignment between the instrument indicators, constructs and concepts describes instrument validity (Schindler, 2019). To determine the validity of the measurement scale in the current study, exploratory factor analysis was used to examine the conceptual alignment of the constructs to the theoretical concepts of the following variables. The construct of business growth (dimension of firm performance) represented the dependent variable, whereas innovativeness, risk-taking, proactiveness, autonomy and competitive aggressiveness (CE dimensions) represented the independent variables, while leadership (dimension of firm climate) represented the moderating variable in the study.

The factors were expected to be correlated; therefore, principal axis factoring was used to extract the number of factors from the 32 items. To enhance the factor, structuring of the oblique rotation with Promax was used to rotate the items. To determine the number of factors to extract, a scree plot was used, together with the eigenvalue rule of greater than one. The total variance explained, as represented in table 4.14 below, was analysed, which had to explain 60% of what occurred in the data set, and which, in the present instance, explained 74.35% of the variance in the original items.

Table 4.14: 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	7.368	29.473	29.473	7.033	28.132	28.132	4.273
2	3.356	13.423	42.896	3.092	12.370	40.502	3.740
3	2.673	10.693	53.588	2.337	9.348	49.850	4.944
4	2.109	8.435	62.024	1.773	7.093	56.943	4.118
5	1.713	6.853	68.876	1.476	5.904	62.847	4.064
6	1.370	5.480	74.357	1.002	4.006	66.853	3.559
7	.891	3.564	77.921				
8	.787	3.146	81.067				
9	.598	2.394	83.461				
10	.544	2.177	85.637				
11	.500	2.001	87.638				
12	.438	1.753	89.391				
13	.387	1.548	90.939				
14	.358	1.432	92.371				
15	.311	1.244	93.615				
16	.287	1.148	94.764				
17	.241	.964	95.728				
18	.224	.897	96.626				
19	.180	.719	97.344				
20	.171	.683	98.027				
21	.147	.589	98.617				
22	.120	.480	99.096				
23	.096	.384	99.481				
24	.083	.332	99.812				
25	.047	.188	100.000				

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Figure 4.5 below demonstrates the scree plot, which indicates that six factors were extracted, as the line graph flattens after six factors. The alignment to the total variance is explained in table 4.14.

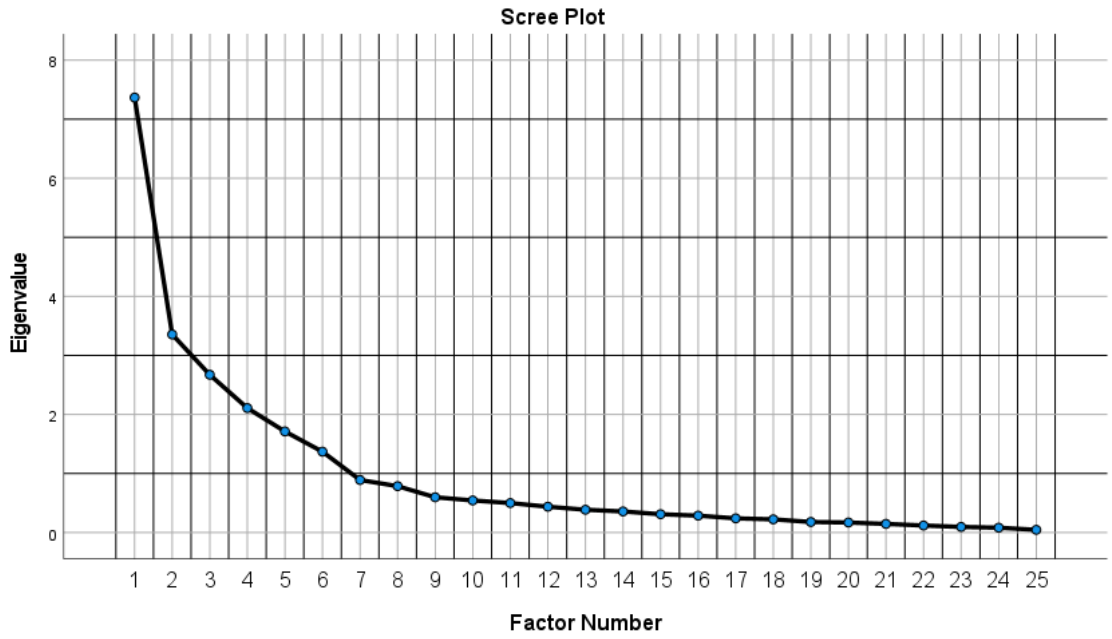


Figure 4.5: Scree plot

The pattern matrix was used to conduct the analysis, in which the 32 items were initially tested. The minimum statistical correlation significance of .40 was set to emphasise the practical significance through principal factor analysis - items that tested less than 0.4 were excluded from the study, as the items concerned were deemed not to have acceptable loadings, with each factor having to possess the loading of three or more items to be accepted (Beavers et al., 2013, as cited in Eaton et al., 2019). Additionally, those items that were dispersed and that had cross-loadings were deleted.

The following items were excluded for failing to meet the above-mentioned criteria: Leadership = LS02 (cross-loaded under an alternate factor = autonomy) and LS03 (correlation significance = -0.687), Autonomy = AUTO01 (cross-loaded under an alternate factor = innovativeness) and all Proactiveness items (PRO04 tested for a correlation significance = -0.887) were dispersed and cross-loaded with LS03. The remaining items possessed a less than three loading onto a factor, with an acceptable correlation significance.

As a result, proactiveness was deemed to be invalid, with it being excluded from any further analysis. Therefore, the relationship between proactiveness and firm performance was not tested, along with the moderating influence on the relationship between proactiveness and firm performance, since the proactiveness construct did not converge into a factor. Table 4.15 below demonstrates the final pattern matrix, with the 25 items and the 6 factors that remained, as they converged and met the above criteria.

Table 4.15: Pattern matrix

Pattern Matrix[a]

	Factor					
	1	2	3	4	5	6
RT03	.848					
RT02	.757					
RT05	.707					
RT04	.651					
RT01	.574					
CA02		.895				
CA01		.866				
CA03		.822				
CA04		.769				
INNO02			.924			
INNO01			.720			
INNO04			.682			
INNO03			.676			
INNO05			.629			
BG04				.840		
BG01				.799		
BG02				.785		
BG03				.685		
AUTO05					.802	
AUTO03					.755	
AUTO02					.715	
AUTO04					.570	
LS04						.985
LS05						.961
LS01						.621

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.[a]

a. Rotation converged in 7 iterations.

Therefore, the hypotheses stipulated were impacted as indicated in Table 4.16 below. In summary, seven constructs, consisting of innovativeness, risk-taking, proactiveness, autonomy, competitive aggressiveness, leadership and business growth were hypothesised for the purpose of this study. However, after concluding the exploratory factor analysis, only six of the seven constructs could be retained, as proactiveness was not found to be a valid construct in the context of the study, and it was, thus, not retained. The final analysis excluded the proactiveness construct. Risk-taking, competitive aggressiveness, innovativeness and business growth all retained their items that were initially hypothesised. Autonomy retained four out of five items, while leadership retained three out of five items.

Table 4.16: Impact of Pattern Matrix on Hypotheses

Hypothesis	Factor of convergence	Items retained	Overall status of
H1: There is a positive influence of innovativeness on firm performance.	Factor 3	• INNO01 • INNO02 • INNO03 • INNO04 • INNO05	Further investigations were conducted to test the potential influence of innovativeness on firm performance
H2: There is a positive influence of risk-taking on firm performance.	Factor 1	• RT01 • RT02 • RT03 • RT04 • RT05	Further investigations were conducted to test the potential influence of risk-

			taking on firm performance
H3: There is a positive influence of proactiveness on firm performance.	Not applicable	None	No further investigations were conducted to test the potential influence of proactiveness on firm performance
H4: There is a positive influence of competitive aggressiveness on firm performance.	Factor 2	• CA01 • CA02 • CA03 • CA04	Further investigations were conducted to test the potential influence of competitive aggressiveness on firm performance
H5: There is a positive influence of autonomy on firm performance.	Factor 5	• AUTO02 • AUTO03 • AUTO04 • AUTO05	Further investigations were conducted to test the potential influence of autonomy on firm performance
H6: Firm climate positively moderates the relationship	Factor 6	• LS01 • LS04 • LS05	Further investigations were conducted

between innovativeness and firm performance.			using these items to determine the interaction term between leadership and innovativeness to test its potential influence of on firm performance
H7: Firm climate positively moderates the relationship between risk-taking and firm performance.	Factor 6	• LS01 • LS04 • LS05	Further investigations were conducted using these items to determine the interaction term between leadership and risk-taking to test its potential influence of on firm performance
H8: Firm climate positively moderates the relationship between proactiveness and firm performance.	Not applicable	None	No further investigations were conducted to determine the interaction term between leadership and proactiveness to test its potential influence of on firm performance

H9: Firm climate positively moderates the relationship between competitive aggressiveness and firm performance.	Factor 6	• LS01 • LS04 • LS05	Further investigations were conducted using these items to determine the interaction term between leadership and competitive aggressiveness to test its potential influence of on firm performance
H10: Firm climate positively moderates the relationship between autonomy and firm performance.	Factor 6	• LS01 • LS04 • LS05	Further investigations were conducted using these items to determine the interaction term between leadership and autonomy to test its potential influence of on firm performance

4.6. Reliability Analysis

The reliability test was conducted to test for the internal consistency of each scale. Therefore, Cronbach's alpha was used to calculate the alpha scores of the constructs, with scores greater than or equal to 0.7 being deemed acceptable (Field, 2013). Table 4.17

illustrates excellent reliability scores for all the constructs involved, as the scores for each were values greater than 0.8, demonstrating that the reliability of the scales was reasonably high, which suggests high internal consistency among the measurement items (Nunnally,1978). Given that the Cronbach's alpha values were all greater than 0.7, the items within each scale could be combined to create a composite scale per construct.

As the items were deleted in each construct, the Cronbach's alpha values would have decreased. Thus, the items within each construct were considered suitable and were reserved, as per the pattern matrix. In such a test, the inter-item correlation values are required to be above 0.3, to represent the items belonging to their respective scales (Field, 2013) – in this instance, all the inter-item correlation values were above 0.3 for all the constructs.

Table 4.17: Reliability scores of the constructs

Construct	Items	Cronbach's Alpha	Level of Reliability
Risk-taking	5	0.866	Excellent
Competitive Aggressiveness	4	0.899	Excellent
Innovativeness	5	0.838	Excellent
Business Growth	4	0.852	Excellent
Autonomy	4	0.825	Excellent
Leadership	3	0.899	Excellent

4.7. Correlational Analysis

To determine in what way the constructs related to each other, Pearson's correlation coefficient and a two-tailed test of significance were conducted. The correlation analysis sought to test hypotheses 1, 2, 4 and 5, by means of assessing the relationship between the four independent variables against the dependent variable. As highlighted in table 4.18 below, there was a positive, small and significant correlation between innovativeness and business growth ($r = 0.320$, $p < 0.01$). The same correlation description between risk-taking and business growth ($r = 0.333$, $p < 0.01$) and between competitive aggressiveness and business growth ($r = 0.332$, $p < 0.01$) was noted in the analysis. A positive, weak and insignificant correlation was found to exist between autonomy and business growth

(0.121, p > 0.01), with the correlations being significant at 0.01 significance level (Field, 2013).

Table 4.18: Pearson's correlation analysis

Correlations

		Risk_Taking	Competitive_Aggressiveness	Innovativeness	Business_Growth	Autonomy
Risk_Taking	Pearson Correlation	1	.312*	.367**	.333**	.406**
	Sig. (2-tailed)		.011	.002	.006	.001
	N	66	66	66	66	66
Competitive_Aggressiveness	Pearson Correlation	.312*	1	.137	.332**	.200
	Sig. (2-tailed)	.011		.274	.006	.108
	N	66	66	66	66	66
Innovativeness	Pearson Correlation	.367**	.137	1	.320**	.443**
	Sig. (2-tailed)	.002	.274		.009	.000
	N	66	66	66	66	66
Business_Growth	Pearson Correlation	.333**	.332**	.320**	1	.121
	Sig. (2-tailed)	.006	.006	.009		.332
	N	66	66	66	66	66
Autonomy	Pearson Correlation	.406**	.200	.443**	.121	1
	Sig. (2-tailed)	.001	.108	.000	.332	
	N	66	66	66	66	66

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

4.8. Assumption Testing

In this section, a discussion surrounding the regression assumptions, including outliers, multicollinearity, independence of errors, normality, autocorrelation, linearity and homoscedasticity, will be articulated.

4.8.1 Multicollinearity

When there is more than one predictor variable in a model, and when two or more are exceedingly correlated (r > 0.8 and above), which may offer no true information about the participants' responses, the occurrence is known as multicollinearity (Cooper & Schindler, 2014; Hair et al., 2007). As such, this test sets out to confirm whether any of the independent variables are related (Tabachnick & Fidell, 2003). In this study, none of the independent variables was highly correlated, as can be seen in table 4.18 above. Therefore, it can be deduced that the assumption of the presence of no multicollinearity was met.

4.8.2 Outliers

Those data points that vary from the data set, due to deviating from the range of the majority of the other explanations and sitting out of the set boundaries are regarded as being outliers - outliers can bias the limitation approximation and amplify the sum of squared error (Field, 2013). The box plot, which is a common method that is used to search for outliers, was utilised in the context of this study. The data point marked with an asterisk (*) in figure 4.6, within the innovativeness construct, identified case 41 as an outlier. To resolve the situation, the outliers concerned were substituted for by the second highest value, 3.00. The box plots, after substituting for the outliers, indicated that there were no more outliers, as illustrated in figure 4.7. As the regression model was tailored with the data that had its outliers substituted, the assumption of there being no outliers was met.

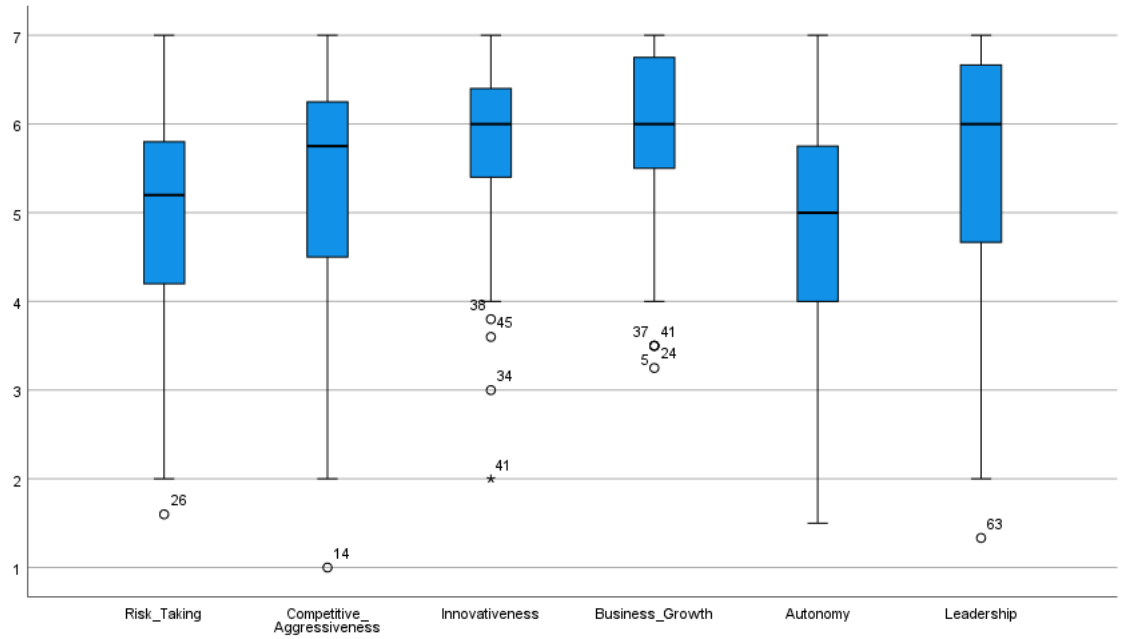


Figure 4.6: Boxplots, including outliers

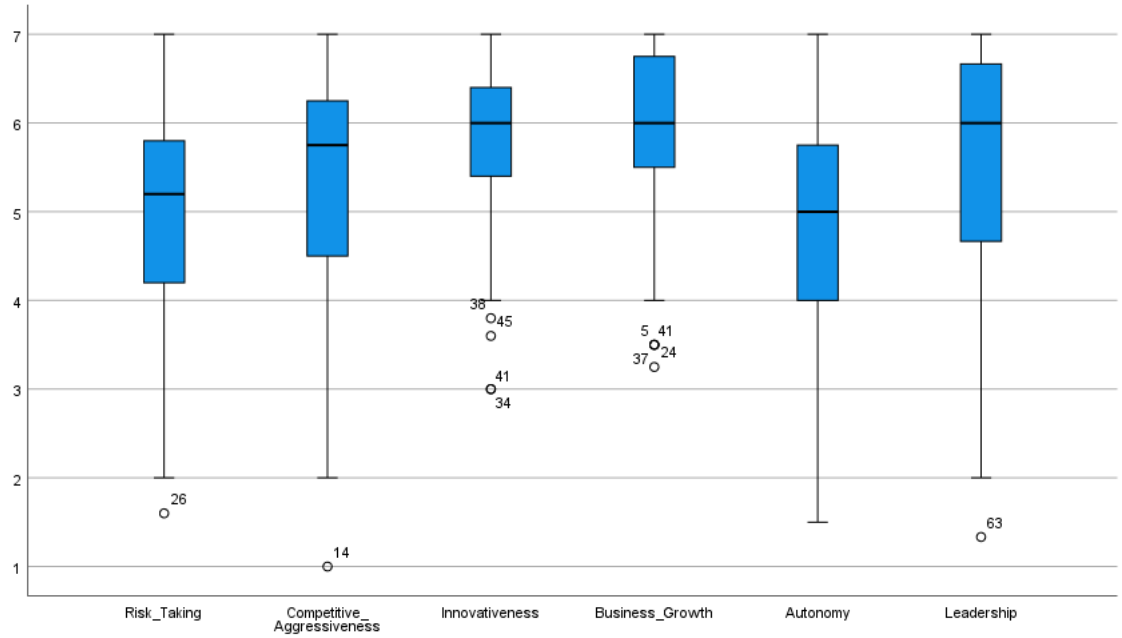


Figure 4.7: Boxplots, excluding outliers

4.8.3 Normality and independent errors

The normality of the constructs was assessed by determining the skewness and kurtosis of the same, as illustrated in the descriptive statistics below in table 4.19 below. For the variables to approximate a normal distribution, the skewness values should be between -3 and 3, whereas the kurtosis values should be between -7 and 7 (Wilcox, 2017). Therefore, in this study, the six constructs approximated a normal distribution, as the skewness and kurtosis results fell within the above ranges.

Table 4.19: Descriptive statistics

Descriptive Statistics

	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Risk_Taking	66	5.40	1.60	7.00	327.46	4.9616	1.16074	1.347	-.723	.295	.471	.582
Competitive_Aggressiveness	66	6.00	1.00	7.00	350.25	5.3068	1.34579	1.811	-1.023	.295	.707	.582
Innovativeness	66	5.00	2.00	7.00	378.44	5.7340	1.01011	1.020	-1.445	.295	2.472	.582
Business_Growth	66	3.75	3.25	7.00	390.75	5.9205	.96691	.935	-1.088	.295	.778	.582
Autonomy	66	5.50	1.50	7.00	316.25	4.7917	1.30648	1.707	-.611	.295	.006	.582
Leadership	66	5.67	1.33	7.00	364.67	5.5253	1.36132	1.853	-1.274	.295	1.241	.582
Valid N (listwise)	66											

Figure 4.8 below represents the normal P-P plot of standardised residuals, which demonstrates that the values were near the diagonal line, indicating that the residuals approximated the normal distribution mandatory for regression (Cooper & Schindler, 2014).

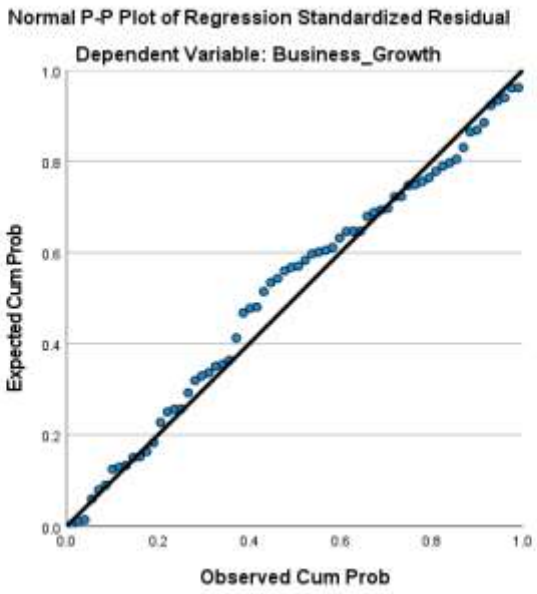


Figure 4.8: Normal P-P plot of regression standardised residual

Figure 4.9 illustrates a histogram of the regression-standardised residuals that were plotted. The histogram depicts that the bars plotted only slightly above the normal curve, thereby confirming that the regression residuals approximated the normal distribution, thus aligning to the normal P-P plot (Cooper & Schindler, 2014). As a result, it can be confirmed that the normality of residuals assumption was met.

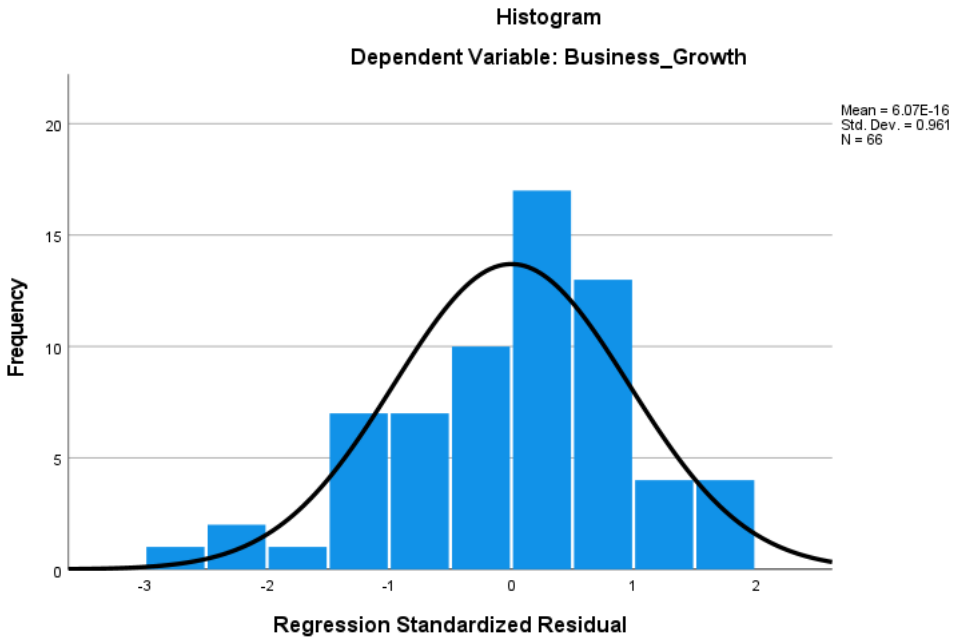


Figure 4.9: Histogram for business growth

4.8.4. Autocorrelation

The model summary in table 4.20 indicates that 22% of the independent variable predicts the dependent variable in model 1 (no moderating variable), and 24% in model 2 (with the moderating variable). The Durbin-Watson (DW) test indicates the independence of error, with a value between 0 and 4 being regarded as acceptable (Field, 2013), which according to table 4.20 applies to models one and two in this study. The DW is centred around the time and order that the observations influence the result. Therefore, a DW statistic of 2.252 indicates the absence of autocorrelation.

Table 4.20: Model summary

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.474[a]	.224	.173	.87908	2.252
2	.493[b]	.243	.180	.87545	

a. Predictors: (Constant), Autonomy, Competitive_Aggressiveness, Innovativeness, Risk_Taking

b. Predictors: (Constant), Autonomy, Competitive_Aggressiveness, Innovativeness, Risk_Taking, Leadership

c. Dependent Variable: Business_Growth

4.8.5 Linearity and residuals

The linearity test determines the existence of a linear relationship between the dependent and independent variables (Tabachnick & Fidell, 2003). The existence of any correlations between the variables that are greater than 0.3 indicates that linearity was experienced (Field, 2013), which, in this study, as per table 4.20 above, was regarded as being applicable, with r = 0.474 in model 1 and r = 0.493 in model 2. As a result, the linearity assumption was met.

4.8.6 Homoscedasticity

Figure 4.10 represents the scatterplot that was generated to assess the independent errors or homoscedasticity in the data. The plot was generated from placing the regression standardised residuals against the regression standardised predicted values. The scatterplot demonstrated that the error terms were scattered mainly between the 0 and +1 values in the absence of any pattern, signifying that the error terms were independent (Field, 2013). Therefore, it can be confirmed that the assumption of homoscedasticity was met.

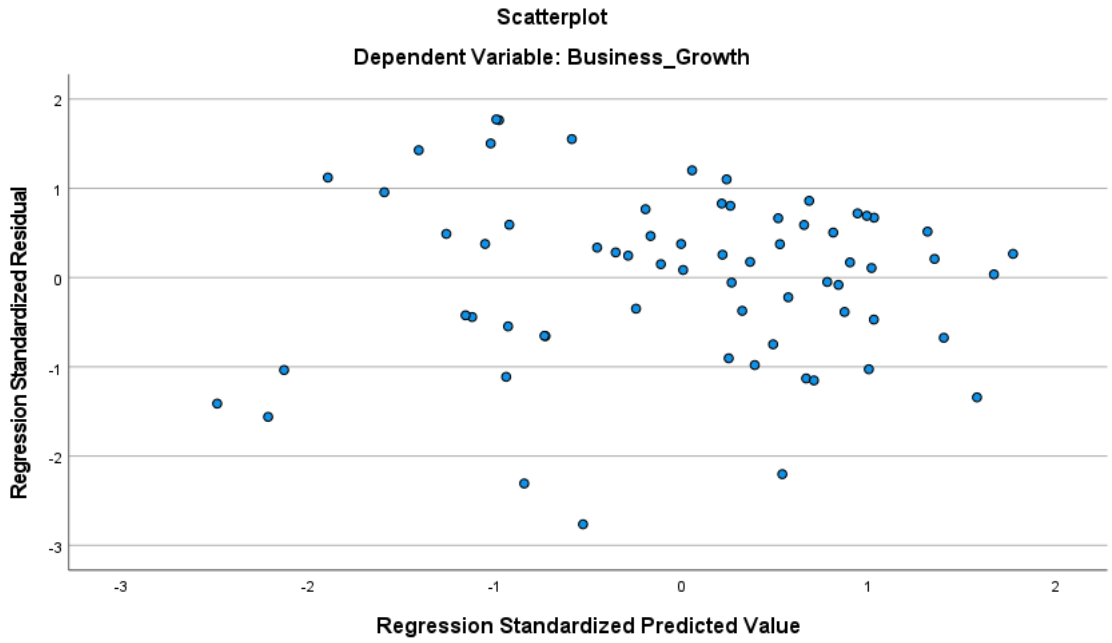


Figure 4.10: The scatterplot

4.9 Hypothesis Testing

Multiple regression analysis was run, wherein the first model innovativeness, risk-taking, competitive aggressiveness and autonomy were selected as the independent variables, with business growth being selected as the dependent variable. The second model consisted of the above variables, with the addition of leadership being selected as the

independent variables. Multiple regression analysis enabled the researcher to determine in what way the multiple independent variables concurrently affected the dependent variable, along with the direction and size of the effect of each independent variable on the dependent variable (Neuman, 2011). Table 4.21 illustrates the model summary, in terms of which it is noted, in relation to model 1, that innovativeness, risk-taking, competitive aggressiveness and autonomy explain 22.4% of the variance in business growth. With the introduction of leadership in model 2, as illustrated in table 4.21 below, a minor improvement in the variance percentage in business growth was noted. Model 2 depicted that innovativeness, risk-taking, competitive aggressiveness, autonomy and leadership explained 24.3% of variance in business growth, signifying 1.9% improvement.

Table 4.21: Model summary

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.474[a]	.224	.173	.87908	2.252
2	.493[b]	.243	.180	.87545	

a. Predictors: (Constant), Autonomy, Competitive_Aggressiveness, Innovativeness, Risk_Taking

b. Predictors: (Constant), Autonomy, Competitive_Aggressiveness, Innovativeness, Risk_Taking, Leadership

c. Dependent Variable: Business_Growth

As illustrated in the table 4.22, the Anova values indicate that, in model 1 and 2, the independent variables were found to be significant in predicting business growth, as model 1 resulted in p-value = 0.003 < 0.05 and model 2 resulted in p-value = 0.004 < 0.05. Interestingly, model 1 showed greater significance than did model 2, suggesting that, with the absence of leadership (2nd predictor or moderator variable), the significance of predicting business growth was greater in the model concerned.

Table 4.22: The ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.630	4	3.408	4.409	.003[b]
	Residual	47.140	61	.773		
	Total	60.770	65			
2	Regression	14.785	5	2.957	3.858	.004[c]
	Residual	45.985	60	.766		
	Total	60.770	65			

a. Dependent Variable: Business_Growth

b. Predictors: (Constant), Autonomy, Competitive_Aggressiveness, Innovativeness, Risk_Taking

c. Predictors: (Constant), Autonomy, Competitive_Aggressiveness, Innovativeness, Risk_Taking, Leadership

Table 4.23 below provides the coefficients of the individual constructs, along with the variance inflation factors (VIFs). From the test, it can be noted that, in model 1, risk-taking (p-value = 0.116) and autonomy (p-value = 0.317) were not significant in predicting business growth, as their p-value failed to meet the minimum scores deemed to be statistically significant (p-value < 0.05) (Cooper & Schindler, 2014). However, risk-taking (B = 0.174; β = 0.209) was found to possess an unstandardised coefficient (B) score that indicated a positive relationship to business growth, and a standardised coefficient beta (β) that suggested that 20.9% of the business growth could be explained by risk-taking. In contrast, the autonomy (B = -0.98; β = -0.133) results display an inverse or negative relationship to business growth, with an additional increase in autonomy, resulting in a 13.3% decrease in business growth.

Model 1 further illustrates that the competitive aggressiveness (p-value = 0.035) and innovativeness (p-value = 0.043) were significant in predicting business growth. Additionally, competitive aggressiveness (B = 0.185; β = 0.257) was found to be positively related to business growth, with it being noted that 25.7% of the business growth could be explained by the competitive aggressiveness. Innovativeness (B = 0.269;

β = 0.267) is shown to be positively related, with 26.7% of the business growth being explained by the dimension. Furthermore, model 1 was unaffected by multicollinearity, since all the VIF values present were less than 10 (Tabachnick & Fidell, 2003).

Within model 2, as presented in table 4.23 below, with the introduction of the second predictor or the moderating variable of leadership, only competitive aggressiveness (p-value = 0.026) was significant in predicting business growth. Risk-taking (p-value = 0.136), innovativeness (p-value = 0.111), autonomy (p-value = 0.245) and leadership (p-value = 0.225) were not significant. From these results for model 2, 27.1% of business growth was explained by the competitive aggressiveness (B = 0.195; β = 0.271), when leadership was introduced, with a 1.4% increase from model 1. Of the business growth, 19.8% was explained by the risk-taking involved (B = 0.165; β = 0.198) when leadership was introduced, signifying a 1.1% decrease, with 21.8% being explained by innovativeness (B = 0.219; β = 0.218), indicating a 4.9% decrease.

Additional increases in autonomy (B = -0.115; β = -0.156) resulted in a 15.6% decrease in business growth, and, with the introduction of leadership, a 2.3% increase. Leadership (B = 0.109; β = 0.153) was found to explain 15.3% of the business growth. In model 2, all of the constructs maintained the same relationship direction (positive or negative) to those that were noted in model 1, with the addition of leadership, which demonstrated a positive relationship to business growth. Multicollinearity was, once again, not found to be an issue, as the VIF values involved were less than 10 (Tabachnick & Fidell, 2003).

Additional analysis of the degree at which the moderating effect of the leadership construct on the relationship between the CE dimensions and firm performance was undertaken in the additional models, so as to test hypotheses H6 to H10. Each CE dimension (risk-taking, innovativeness, autonomy and competitive aggressiveness) was used to produce an interactive term between the relevant CE dimension and leadership, in line with the CE dimension *LS (leadership) = CE_LS. Thereafter, a regression analysis was conducted, with the results being reported.

Table 4.23: Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	3.002	.762		3.938	.000	1.478	4.526		
	Risk_Taking	.174	.109	.209	1.595	.116	-.044	.392	.741	1.349
	Competitive_Aggressiveness	.185	.086	.257	2.161	.035	.014	.356	.896	1.116
	Innovativeness	.269	.130	.267	2.065	.043	.009	.529	.762	1.312
	Autonomy	-.098	.098	-.133	-1.008	.317	-.294	.097	.731	1.369
2	(Constant)	2.759	.784		3.518	.001	1.190	4.328		
	Risk_Taking	.165	.109	.198	1.512	.136	-.053	.383	.737	1.356
	Competitive_Aggressiveness	.195	.086	.271	2.277	.026	.024	.366	.888	1.126
	Innovativeness	.219	.136	.218	1.616	.111	-.052	.491	.695	1.439
	Autonomy	-.115	.098	-.156	-1.175	.245	-.312	.081	.716	1.396
	Leadership	.109	.089	.153	1.227	.225	-.068	.286	.811	1.234

a. Dependent Variable: Business_Growth

4.9.1. Hypothesis 1 (H1)

H1: There is a positive influence of innovativeness on firm performance.

In an attempt to validate the outcome of the analysis, a multiple regression test was conducted, in terms of which the priori expectation was that the (B) should be greater than zero (Field, 2013). The results from table 4.23 demonstrates that, for innovativeness ($B = 0.269$; $\beta = 0.267$; p-value = 0.043), there is a positive association with business growth, which is significant in terms of predicting business growth, as the p-value < 0.05 (Cooper & Schindler, 2014). Additionally, 26.7% of the business growth experienced could be explained by innovativeness.

Therefore, the above suggests that, the higher the level of CE is in terms of the innovativeness dimension, the greater the firm performance is in terms of business growth. As a result of the findings, it can be deduced that hypothesis 1 (H1) is supported and significant.

4.9.2. Hypothesis 2 (H2)

H2: There is a positive influence of risk-taking on firm performance.

The results from table 4.23 after the multiple regression test was run, indicate that the risk-taking (B = 0.174; β = 0.209; p-value = 0.116) undergone was not significant in predicting the business growth involved, as the p-value > 0.05 (Cooper & Schindler, 2014). However, the B score was greater than zero, representing a positive relationship with business growth, with 20.9% of business growth being explained by risk-taking.

Therefore, the above suggests that the higher the level of CE was found to be in terms of the risk-taking dimension, the greater was the firm performance in terms of business growth. As a result of the findings, it can be deduced that hypothesis 2 (H2) is supported, but not significant.

4.9.3. Hypothesis 3 (H3)

H3: There is a positive influence of proactiveness on firm performance.

Since the proactiveness construct did not converge into a factor, the construct was deemed to be invalid, with it being excluded from any further analysis. Therefore, the influence of proactiveness on firm performance was not tested.

4.9.4. Hypothesis 4 (H4)

H4: There is a positive influence of competitive aggressiveness on firm performance.

As noted in table 4.23 for competitive aggressiveness (B = 0.185; β = 0.257; p-value = 0.035), there is a positive association with business growth, as the B score was found to be greater than zero. Competitive aggressiveness is also significant in predicting business growth, as the p-value < 0.05 (Cooper & Schindler, 2014). Additionally, 25.7% of business growth is explained by the competitive aggressiveness.

Therefore, the above suggests that, the higher the level of CE is in terms of the competitive aggressiveness dimension, the greater is the firm performance in terms of business growth. As a result of the findings made, it can be deduced that hypothesis 4 (H4) is supported and significant.

4.9.5. Hypothesis 5 (H5)

H5: There is a positive influence of autonomy on firm performance.

Table 4.23 supported this notion, as, after the multiple regression tests were run, the results indicate that autonomy (B = -0.98; β = -0.133; p-value = 0.317) was not significant in predicting business growth, as the p-value > 0.05 (Cooper & Schindler, 2014). The regression analysis further revealed a negative association of autonomy with business growth, as the B score was less than zero, and an additional increase in autonomy resulted in a 13.3% decrease in business growth.

Therefore, the above suggests that, the higher the level of CE is in terms of the autonomy dimension, the lower is the firm performance in terms of business growth. As a result of such findings, it can be deduced that hypothesis 5 (H5) is unsupported, and that it is not significant.

4.9.6. Hypothesis 6 (H6)

H6: Firm climate positively moderates the relationship between innovativeness and firm performance.

The stepwise regression model was run to test the moderating role of firm climate, in terms of the leadership dimension, on the relationship between innovativeness and firm performance, in relation to business growth. Table 4.21 above that a change occurred in the value of R^2 when the leadership variable was introduced into the model, with the coefficient of determination increasing from 22.4% to 24.3%. As such, the above indicates the presence of some form of moderation or interaction. To determine the scale of the moderating effect, an interactive term was created between each CE factor (risk-taking, innovativeness, competitive aggressiveness and autonomy) and the leadership factor (CE dimension*Leadership = CE dimension_LS).

The regression model articulated in table 4.24 illustrates that the interaction term INNO_LS (B = -0.103; β = -1.136; p-value = 0.178), which explains the moderating effect of leadership on the relationship between innovativeness and business growth, was not significant, as the p-value > 0.05 , where, to maintain statistical significance, p-value < 0.05 (Cooper & Schindler, 2014). Additionally, there is a negative association with the relationship between innovativeness and business growth, as the B score was less than zero, suggesting that leadership negatively moderates the relationship between innovativeness and business growth. Therefore, it can be deduced that the higher the level of firm climate in terms of the leadership dimension, the lower is the relationship between innovativeness and firm performance in terms of business growth. Thus, hypothesis 6 (H6) is unsupported and not significant.

Table 4.24: Coefficients of the moderating effects of leadership on the relationship between innovativeness and business growth

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
3	(Constant)	.986	2.226		.443	.659
	Leadership	.666	.430	.938	1.550	.126
	Innovativeness	.798	.409	.792	1.951	.056
	INNO_LS	-.103	.076	-1.136	-1.363	.178

a. Dependent Variable: Business_Growth

4.9.7. Hypothesis 7 (H7)

H7: Firm climate positively moderates the relationship between risk-taking and firm performance.

The regression model articulated in table 4.25 illustrates that the interaction term RT_LS (B = -0.089; β = - 0.935; p-value = 0.214), which explains the moderating effect of leadership on the relationship between risk-taking and business growth, was not significant, as the p-value > 0.05, where, to maintain the statistical significance, p-value < 0.05 (Cooper & Schindler, 2014). There is a negative association of leadership with the relationship between risk-taking and business growth, as the B score was found to be less than zero, suggesting that leadership negatively moderates the relationship between risk-taking and business growth. Therefore, it can be deduced that the higher the level of firm climate in terms of the leadership dimension, the lower is the relationship between risk-taking and firm performance in terms of business growth. Thus, the hypothesis 7 (H7) is unsupported and not significant.

Table 4.25: Coefficients of the moderating effects of leadership on the relationship between risk-taking and business growth

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
3	(Constant)	1.745	1.916		.911	.366
	Risk_Taking	.743	.408	.891	1.818	.074
	Leadership	.538	.341	.757	1.576	.120
	RT_LS	-.089	.071	-.935	-1.255	.214

a. Dependent Variable: Business_Growth

4.9.8. Hypothesis 8 (H8)

H8: Firm climate positively moderates the relationship between proactiveness and firm performance.

Since the proactiveness construct did not converge into a factor, the construct was deemed to be invalid and excluded from further analysis. Therefore, the moderating influence of firm climate on the relationship between proactiveness and firm performance was not tested.

4.9.9. Hypothesis 9 (H9)

H9: Firm climate positively moderates the relationship between competitive aggressiveness and firm performance.

The regression model articulated in table 4.26 illustrates that the interaction term CA_LS (B = -0.176; β = -1.977; p-value = 0.083), explaining the moderating effect of leadership on the relationship between competitive aggressiveness and business growth being significant, as the p-value < 0.05, thereby maintaining statistical significance (Cooper & Schindler, 2014).

However, the association of leadership, with the relationship between competitive aggressiveness and business growth, is negative, as the B score was found to be less than zero. The β score produced was negative, signifying that the higher the level of leadership, the lower was the relationship between competitive aggressiveness and business growth, suggesting that leadership negatively moderates the relationship between competitive aggressiveness and business growth.

As such, although the test proved that hypothesis 9 (H9) is significant, it is not supported, due to the negative moderation that the firm climate, in terms of leadership, causes for the relationship between competitive aggressiveness and firm performance.

Table 4.26: Coefficients of the moderating effects of leadership on the relationship between competitive aggressiveness and business growth

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
3	(Constant)	-1.813	2.688		-.675	.502
	Competitive_Aggressiveness	1.261	.490	1.755	2.576	.012
	Leadership	1.122	.457	1.580	2.455	.017
	CA_LS	-.176	.083	-1.977	-2.119	.038

a. Dependent Variable: Business_Growth

4.9.10. Hypothesis 10 (H10)

H10: Firm climate positively moderates the relationship between autonomy and firm performance.

The regression model articulated in table 4.27 illustrates that the interaction term AUTO_LS (B = 0.003; β = 0.034; p-value = 0.959), which explains the moderating effect

of leadership on the relationship between autonomy and business growth, was not significant, as the p-value = 0.959 > 0.05, where, to maintain statistical significance, p-value < 0.05 (Cooper & Schindler, 2014).

However, there is a positive association of leadership, with the relationship between autonomy and business growth, as the B score was found to be greater than zero and positive.

Therefore, it can be deduced that, the higher the level of firm climate in terms of the leadership dimension, the higher is the relationship between autonomy and firm performance in terms of business growth, suggesting that leadership positively moderates the relationship between autonomy and business growth. Furthermore, 34% of the relationship between autonomy and business growth is explained by leadership. Thus, the hypothesis 10 (H10) is supported and not significant.

Table 4.27: Coefficients of the moderating effects of leadership on the relationship between autonomy and business growth

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
3	(Constant)	4.927	1.491		3.303	.002
	Leadership	.144	.277	.203	.521	.605
	Autonomy	.024	.331	.032	.072	.943
	AUTO_LS	.003	.059	.034	.052	.959

a. Dependent Variable: Business_Growth

4.10 Summary of the results

From the various analyses conducted, the reliability of the constructs (Cronbach alpha score) was above 0.7, therefore leading to them being deemed statistically acceptable. The KMO value of 0.757 showed sample adequacy, as it was greater than the minimum

required value of 0.5. The items loaded onto the appropriate factors, with the exception of LS02, LS03 AUTO01 and PRO04, were, thus, removed. Proactiveness was excluded from further analysis, as the construct failed to load three or more items during the EFA.

The results were further relevant, in that H1 and H4 were significant and supported. H2 and H10 were supported, but not significant, while H5, H6 and H7 were neither statistically significant nor supported. H3 and H8 could then be excluded from the testing, due to the above narrative regarding the proactiveness construct. Although H9 was confirmed to be significant, the hypothesis was not supported, due to the inverse or negative effect shown.

CHAPTER 5: DISCUSSION OF THE RESULTS

5.1 Introduction

The current study suggested important insights by providing a pragmatic analysis of the contribution of CE dimensions on firm performance in the context of South African NGOs. The study further investigated the moderating influence of firm climate, in terms of leadership, between the relationship of CE dimensions and performance.

This chapter provides an academic foundation that allows for the interpretation of the results of the research, as presented in the previous section. The demographic statistics, descriptive statistics and the multiple regression analyses used to test the hypotheses are discussed in relation to the empirical findings and theoretical concepts investigated in the study.

5.2 Demographic profile of respondents

A total of 66 responses were utilised for the analysis, from the target sample size of 103. Although 107 responses were recorded on Qualtrics (online survey tool), after the data screening and cleaning process, only 66 responses were found to be fit for use. However, the number of fit responses fulfilled the required minimum sample size that was needed to be able to continue with the selected statistical method (SEM) of analysis.

The KMO measuring sample adequacy reported a value of 0.757, which was deemed acceptable, as the value concerned required a minimum score of 0.5 or greater (Nunnally, 1978). Therefore, it was deduced that the sample size was suitable for the current study. The Bartlett's test of sphericity was regarded as being significant, as the result of the test revealed a p-value = 0.000 < 0.05, therefore highlighting that the items had correlation scores sufficient to conduct the factor analysis (Nunnally, 1978). The dependent, independent and moderating variables were analysed on the basis of the responses collected through the online survey questionnaire.

The 66 responses that were analysed revealed that there was a 50/50 per cent split in terms of the male and female participants. In terms of the age demographics of the participants,

40.9% were found to be between the ages of 36 and 45 years old, 25.8% between the ages of 46 and 55 years old, 22.7% between 26 and 35 years old, and 10.6% between 56 and 65 years old. From the results obtained, the assumption can be made that the higher percentage of respondents between the ages of 36 and 45 years old could have resulted from the larger number of such participants who part took in the study, as the years concerned are the primary employment years, whereas the ages of 56 to 65 years old lean more towards retirement age.

The ethnic composition of the participants illustrated that 60.6% of the respondents were African, 4.5% coloured, 12.1% Indian and 22.7% white. According to the 2019 Statistics SA midyear population estimates for South Africa by population group and sex, 80.7% of the South African population are black Africans. Therefore, the assumption could be made that there would be a greater likelihood of appointing more African employees within a business, which, in the context of the current study, might have been the rationale for the larger number of African participants taking part than did any other race group.

Further to the above, the demographic data collected from the participants involved demonstrated that the majority held a bachelor's degree (17 participants), followed by those who held a master's degree (15 participants), as was depicted in table 4.4. The least number of participants held a national higher diploma (3 participants),

The cross-tabulation in table 4.5 indicated that the majority of the participants occupied middle management levels, while the minority occupied top management levels. Senior management participants made up the second highest percentage of the respondents, followed by junior management. In the context of this study, which sought to determine the contribution that CE dimensions had on firm performance, when moderated by firm climate, the management levels of the participants were important to consider, as the researcher considered management to be a key driver in fostering the presence of CE dimensions in an organisation, with leadership being the dimension investigated as the moderating variable in the study.

The age, education, ethnic and gender compositions in the present study can be compared with, and benchmarked to, the entrepreneurial activity noted as forming part of the results of the GEM 2017/2018 report, by investigating the South African results of the same

(Herrington & Kew, 2018). According to the GEM 2017/2018 report, the entrepreneurial activity in South Africa in the age group 25 to 34 years was recorded as being 14.5% of the total in 2017. The 35- to 44-year-old category of entrepreneurs increased from 8.4% in 2016 to 13.5% in 2017 (Herrington & Kew, 2018). Considering the age categories in the context of the current study, the deduction can be made that entrepreneurial topics or activities tend to interest the age range of 25 to 44 years, which aligns with that of the respondents in this study.

The report highlights that opportunity-driven entrepreneurs consisted of 65.7% women and 82% men in 2017 (Herrington & Kew, 2018). Therefore, the gender composition in the current study might not have represented the true number of male and female participants who were interested in entrepreneurial topics or activities, as present among the population within the NGOs at the time of the study. The 2017/2018 GEM report indicated that black Africans made up the majority of South Africans who were opportunity- and necessity-driven entrepreneurs, at a percentage of 88.1% of total entrepreneurial activity (TEA), with white people at 4.8%, Indian people at 2.9% and coloured people at 4.1% (Herrington & Kew, 2018). The figures concerned align somewhat align with the ethnicity composition in the current study, as the respondents aligned, in terms of the African composition, as they represented the majority of those who participated in the study, followed by the percentage of white participants. However, the figures representing the coloured and Indian people in the context of the present study were inverted. The above suggests that the percentage of coloured participants in the study might not have represented the composition of the coloured population within South African NGOs who might have been concerned with the entrepreneurial topics or activities involved at the time of the study.

Finally, the GEM 2017/2018 report illustrates that over half of the early-stage entrepreneurs in South Africa have at least a secondary degree (52%) or a post-secondary degree (21.3%) (Herrington & Kew, 2018). From the results of this study, and in the context of the educational levels of the participants, a total of 25.8% were found to possess a secondary degree, with 51.5% being found to possess a post-secondary degree (combined percentages of those possessing a doctorate, or an honours or master's degree), as indicated in table 4.4 above. The above suggests that, in the context of the current

study, more respondents in possession of a post-secondary degree participated in the study. Such might have been as a result of their greater interest in entrepreneurial topics or activities, along with a greater likelihood of such qualified personnel being appointed as staff within the NGOs in South Africa that operate in a niche field, like HIV/AIDs research, treatment and care.

5.3. Hypotheses Discussion

5.3.1 Hypothesis 1

- **H1:** There is a positive influence of innovativeness on firm performance.

The outcomes of the analysis in chapter 4 reinforced this hypothesis and established that the higher the level of CE is in terms of the innovativeness dimension, the greater is the firm performance in terms of business growth.

As indicated previously, a study conducted by Abuya (2016), who investigated the relationship between EO and performance of commercial banks in Kenya, EO was conceptualized as being multidimensional consisting of risk-taking, autonomy, innovativeness, competitive aggressiveness and proactiveness. Performance of the bank was measured by dimensions of profit and non-performing loans - key findings of the study revealed that the respondent perceived the increase in profits of the bank being attributed to EO action, along with the decrease in the amount of non-performing loans (Abuya, 2016). In investigating the relationship between CE and firm performance in terms of profit and non-performing loans, the study proposes that CE had a substantial impact on firm performance, in terms of financial facets - innovativeness, in particular, was found to have had the greatest results on firm performance, which aligns with the suggestions of other scholars, who indicate that innovativeness is the most significant factor of CE, and the foremost predictor of performance (Abuya, 2016; Antoncic & Hisrich, 2003; Zahra, 1991).

Similarly, in the context of the current study, the results related to the innovativeness and firm performance in terms of business growth were supported and deemed to be statistically significant, thereby aligning with the above literature.

5.3.2 Hypothesis 2

- **H2:** There is a positive influence of risk-taking on firm performance.

The conclusion of the analysis revealed that the higher the level of CE is in terms of the risk-taking dimension, the greater is the firm performance in terms of business growth. However, even though the hypothesis was supported, the results further highlighted that the influence of risk-taking on performance was not statistically significant.

The above findings are consistent with the results of the study conducted by Shamsuddin et al. (2012), wherein the researchers analysed the consequence of CE dimensions on the financial performance of established Malaysian state government-linked corporations. Four dimensions of CE were investigated in the above context, which included (1) proactiveness, (2) risk-taking, (3) innovation and (4) self-renewal - the researchers further examined the moderating effects of the supportive organisational structure, rewards and resource availability, on the relationship between CE dimensions and organisational performance (Shamsuddin et al., 2012). The findings of the study highlight that risk-taking was not found to have a direct effect on financial performance, however, supportive organisational structure, resource availability, and rewards were revealed to moderate the relationship between risk-taking and financial performance (Shamsuddin et al., 2012).

In the context of the current study, a similar finding was made, in that risk-taking, in the context of the South African NGOs conducting HIV/AIDS research, treatment and care might not have a direct impact on firm performance. Hence, the risk-taking construct on firm performance was determined not to be statistically significant, as other moderating and mediating variables in the environment or context were not tested. However, it was noted from the findings that a positive influence of risk-taking on firm performance was experienced in the above context, thus supporting the hypothesis stated.

5.3.3. Hypothesis 3

- **H3:** There is a positive influence of proactiveness on firm performance.

The proactiveness construct did not converge into a factor, as the construct was deemed to be invalid and excluded from any further analysis. Therefore, the influence of proactiveness on firm performance could not be tested further in the study.

5.3.4. Hypothesis 4

- **H4:** There is a positive influence of competitive aggressiveness on firm performance.

From the empirical evidence and analysis of the same, it was concluded that the higher the level of CE in terms of the competitive aggressiveness dimension, the greater the firm performance was in terms of business growth.

Aktan and Bulut (2008) studied the effects of four subdimensions of CE, including competitive aggressiveness and its impact on the financial performance of 312 firms - the study investigated the return on equity, the return on investment, the market-based measurements and the growth of sales. The study highlighted that the correlation coefficient results of the CE dimensions, which specifically included competitive aggressiveness, were positive and significant against the contributions made towards financial performance (Aktan & Bulut, 2008).

In the context of the current study, a similar conclusion was drawn, in that competitive aggressiveness, in the context of the South African NGOs that conduct HIV/AIDS research, treatment and care, was found to influence firm performance positively in terms of business growth. The above supported the hypothesis, which was evident of it being significant.

5.3.5. Hypothesis 5

- **H5:** There is a positive influence of autonomy on firm performance.

The analysis of the empirical evidence in the study revealed that the higher the level of CE in terms of the autonomy dimension, the lower the firm performance was in terms of

business growth. As a result of the findings made, it can be deduced that the hypothesis is not supported, and that it is not significant.

As mentioned previously, in a study by Gard et al. (2013), who sought to clarify the multidimensional phenomenon of autonomy, to determine the success of teams developing new business in small- and medium-sized highly technological firms (SMEs), found a positive relationship between the autonomy dimensions and firm performance, while taking functional importance as a moderating variable. Therefore, one can assume that, in the absence of specific moderating variables, autonomy might not positively influence firm performance in the context of South African NGOs. Similarly, Lassen (2007) examined seven recognisable highly technological firms that changed to radical technological innovation - the study proposed a strategic entrepreneur model to be assumed by the firms. The financial performance of the companies was analysed as the dependent variable and the level of entrepreneurship of the companies, like the effectiveness combination of innovativeness, proactiveness, autonomy, competitive aggressiveness and risk-taking, as the independent variables (Lassen, 2007).

The study noted positive results in the relationship between the variables, and emphasised the importance of the commercialisation of products and technologies for empowering the companies to seize additional value in the market, however, autonomy was not measured as an individual construct to determine its single impact on the financial performance (Lassen, 2007).

Therefore, it can be assumed that autonomy has a significant and positive influence when it is moderated, or combined, with the antecedents of other constructs, thereby suggesting that the findings made in the context of this study are consistent with the previous research conducted.

5.3.6. Hypotheses 6, 7, 8, 9 and 10

- **H6:** Firm climate positively moderates the relationship between innovativeness and firm performance.
- **H7:** Firm climate positively moderates the relationship between risk-taking and firm performance.

- **H8:** Firm climate positively moderates the relationship between proactiveness and firm performance.
- **H9:** Firm climate positively moderates the relationship between competitive aggressiveness and firm performance.
- **H10:** Firm climate positively moderates the relationship between autonomy and firm performance.

The results for H6 in the study revealed that, the higher the level of firm climate in terms of the leadership dimension, the lower the relationship between innovativeness and firm performance, in terms of business growth. Thus, the hypothesis is not supported and it is not significant. H7 indicated that the higher the level of firm climate in terms of the leadership dimension, the lower is the relationship between risk-taking and firm performance in terms of business growth. Therefore, this hypothesis was also neither supported nor significant.

H8 was excluded from this level of analysis, as the proactiveness construct did not converge into a factor, thus the construct was deemed to be invalid. Therefore, the moderating influence of firm climate on the relationship between proactiveness and firm performance was not tested. In the case of H9, the test proves that, despite its significance, it was not supported, due to the negative moderating influence of leadership on the relationship between competitive aggressiveness and firm performance. Finally, the empirical evidence of H10 showed that the higher the level of firm climate is in terms of the leadership dimension, the higher is the relationship between autonomy and firm performance in terms of business growth. Thus, H10 is supported, although it is not significant.

The results of the influence of the moderating variable on the relationship between each independent variable and the dependent variable were not surprising, considering the previous studies conducted. For example, a study by Felix et al. (2018) inspected the effect of cultural leadership factors (team-oriented, humane, charismatic/value-based, autonomous and self-protective) on the rates of opportunity and necessity entrepreneurship - the researchers conducted multiple regression analysis, with observations from 34 countries, so as to test their hypotheses. Data extracted from the 2013 GEM report was utilised for the dependent variable, while data from the 2013

Global Leadership and Organizational Behaviour Effectiveness (GLOBE) report was used to produce the leadership factors as the independent variables concerned (Felix et al., 2018).

The outcomes of the study indicated that all forms of leadership considered in the study had a relevant effect on the entrepreneurial activity involved, with charismatic leadership showing the greatest effect on entrepreneurial activity, like opportunity entrepreneurship - more interestingly, the results demonstrated that autonomous leadership had a negative influence on entrepreneurial activity, although, when it was moderated by the humane as a dimension, the relationship altered (Felix et al., 2018)

The above study by Felix et al. (2018) illustrates, in the context of the current paper, that leadership consists of numerous factors, which were not investigated. Additionally, it is evident that, even though leadership might have a positive effect on variables, such as in the case of H10, the same may not be significant. Alternatively, leadership can also have a negative influence on variables, as was the case in H6, H7 and H9, although such might change, depending on the constructs with which it interacts, which is the reason for the results differing from the premise contained in H10. Even though, for the purpose of the current research, leadership was used as a moderating variable, as opposed to as an independent variable, as in the study conducted by Felix et al. (2018) the principal effect of the construct remains consistent. Such is so, in that depending on other constructs with which it interacts from a moderating, mediating, dependent or independent perspective, and the leadership factor being investigated, might determine the type of influence and significance experienced or produced.

5.4. Conclusion

The analysis of the results obtained has highlighted that, in terms of the demographic profile, consisting of the age, education, ethnic and gender compositions of the participants in this study, comparisons could be drawn and benchmarked to the entrepreneurial antecedents. Such has been noted as forming part of the results of the GEM 2017/2018 report, entailing the South African results (Herrington & Kew, 2018). The age categories in the context of the study illustrate that entrepreneurial topics or

activities tend to interest the age range of 25- to 44-year-olds, which aligns to the respondents in the current research. The gender composition in this study might not represent the true number of male and female participants who were, at the time of the research, interested in entrepreneurial topics or activities among the population within NGOs, when looking at the results of the 2017/2018 GEM report, as the gender splits involved were not aligned.

The figures from the GEM 2017/2018 report somewhat align to the ethnicity composition in the current study, as the respondents aligned to the African composition concerned, as they represented the majority who participated in the study, followed by the white composition. However, the figures representing the coloured and Indian composition in the context of the study were inverted. The above suggests that the coloured participants in the study might not represent the composition of the coloured population within South African NGOs that might be concerned with entrepreneurial topics or activities. Additionally, according to the Statistics SA mid-year population estimates 2020 for South Africa by population group and sex, 80.8% of the South African population were black Africans. Therefore, the assumption can be made of there being a greater likelihood of appointing more African employees within a business, which, in the context of the current study, was cited as being the rationale for the larger number of African participants than participants of other racial groups.

The ethnic composition of the participants illustrated in the 2017/2018 GEM report and the Statistics SA mid-year population estimates 2020 for South Africa by population group and sex suggest that there should be a greater likelihood of appointing more African employees within a business. For the context of the current study, such might be the rationale for the larger number of African participants than those of other groups.

In terms of the educational levels of the participants, when compared to the findings of the 2017/2018 GEM report, in the context of the current study, a larger number of the respondents who possessed post-secondary degrees participated in the study. Such might have been as a result of their greater interest in entrepreneurial topics or activities, along with a greater likelihood of such qualified personnel being appointed as staff within the NGOs in South Africa that operate in a niche field, like HIV/AIDs research, treatment and care. Furthermore, Europe-based studies have found that graduates considered

experiences in NPOs as being a valued option for their career advancement (Gaffurini, 2015).

The descriptive statistics found revealed that, overall, the participants in the current study were more prone to select various degrees of agreement in relation to the items on the Likert scale.

From the multiple regression analysis conducted to test each hypothesis, the results of the same are summarised in table 5.1 below.

Table 5.1: Summary of Hypotheses

Hypothesis	Accepted, Invalid or Rejected
H1: There is a positive influence of innovativeness on firm performance.	Accepted
H2: There is a positive influence of risk-taking on firm performance.	Accepted
H3: There is a positive influence of proactiveness on firm performance.	Invalid
H4: There is a positive influence of competitive aggressiveness on firm performance.	Accepted
H5: There is a positive influence of autonomy on firm performance.	Rejected

H6: Firm climate positively moderates the relationship between innovativeness and firm performance.	Rejected
H7: Firm climate positively moderates the relationship between risk-taking and firm performance.	Rejected
H8: Firm climate positively moderates the relationship between proactiveness and firm performance.	Invalid
H9: Firm climate positively moderates the relationship between competitive aggressiveness and firm performance.	Rejected
H10: Firm climate positively moderates the relationship between autonomy and firm performance.	Accepted

CHAPTER 6: CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter will focus on the conclusions, implications and recommendations in the context of the findings and problem statements posed in the earlier chapters of this research report.

6.2 Conclusions of the study

With the exception of the CE dimension of autonomy and proactiveness; innovativeness, risk-taking and competitiveness were perceived to be key influencers of firm performance in terms of business growth, within South African NGOs that aid in providing HIV/AIDS research, treatment and care. Overall, the participants displayed a greater tendency towards selecting various degrees of agreement in response to the questions posed on the online questionnaire. Interestingly, although the autonomy dimension resulted in a negative influence in terms of its relationship to firm performance, the empirical evidence suggests that, when the dimension is moderated by leadership factors, it changes to a positive outcome in relation to firm performance, thereby confirming that, for positive firm performance to be experienced in South African NGOs, autonomy is a good influencer, only if leadership criteria govern the same.

The study further demonstrated that leadership inversely influences the relationship between innovativeness, risk-taking and competitive aggressiveness. In the context of the previous literature, such was to have been expected, as it was noted that, for leadership factors to influence relationships positively in a test, the interaction among the particular variables is important, including consideration of the moderating, mediating and dependent variables concerned. The interaction terms and the type of leadership factors explored can influence the particular relationship involved.

6.3 Implications and Recommendations

The motivation for this study was due to the fact that the NGOs that assist South Africa with HIV/AIDS research, prevent, treatment or care are far too reliant on the government and on international entities for funding by means of donor funds or the awarding of grants. Therefore, such organisations may be faced with a multitude of obstacles that they would need to employ strategies to overcome. For example, Bronis (2001, as cited in Kearney et al., 2007), examined government reformers from across the globe and provided data that demonstrated key challenges faced when public sector innovation is being implemented - he categorised these challenges into three groups, namely bureaucracy/organization; political environment; and external environment. Interestingly, the study demonstrated that from the political environment group, public sector organisations whom attempt to implement innovation maybe be faced with low levels of funding, political disagreement with initiatives and legislative regulations, that hinder the deployment of the innovative strategy developed or conceived (Bronis, 2001, as cited in Kearney et al. 2007).

Thus, the current study sought to provide empirical evidence, suggesting that, by embodying CE in its various dimensions, firm performance is likely to be positively influenced in terms of the growth of business. This, in turn, allows such organisations to remain sustainable by means of obtaining the competitive edge, and by, perhaps, even discovering innovative ways of generating income to drive their socio-economic mission.

The recommendation is that the NGOs that operate in the above space should develop a greater appetite for risk-taking, as, even though the results found were positive toward firm performance, the same was not significant. Additionally, leadership programmes might need to be invested in, as the evidence from previous studies suggests positive outcomes, whereas, in the present instance, such was not the case. In addition, CES that are tailored to the public sector are to be considered, as previous literature supports the notion, that in such an environment, various circumstances, conditions and antecedents impact the CES deployed, which may influence internal entrepreneurial pursuits and its dimensions (Kearney & Meynhardt, 2016).

6.4 Limitations of the study

The current research study was limited in its scope, in that the focus was on organisations that are defined as NGOs and that fall within the health sector, specialising in HIV/AIDS research, treatment and care. In addition, the study utilised only close-ended online questionnaires, that were disseminated to management at the different occupational levels of junior, middle, senior and top management only. Therefore, a holistic perspective on the variables being measured might have been lost. In addition, the study did not investigate the various leadership factors and the moderating impact that each might have had on the relationship between CE dimensions and firm performance.

6.5 Suggestions for further research

Firstly, the various leadership factors should be investigated to discover the impact that each has on the relationship between the CE dimensions and firm performance. Additionally, an in-depth study, perhaps even a qualitative study, should be embarked upon to determine the true relationship between risk-taking and firm performance, and, then, on the moderating influence of firm climate in terms of leadership on the relationship between autonomy and firm performance. Such is so, as even though the relationships concerned were supported, they were not significant.

Secondly, a large sample of NGOs operating in the HIV/AIDS field should be persuaded to participate in the study, and going beyond just management level should be considered, so as to be able to investigate the difference between management and non-management staff.

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APPENDIX A

Research instrument

Corporate Entrepreneurship Measuring Instrument

Survey Flow

Block: Cover Page (1 Question)
Standard: 1. Informed Consent (1 Question)
Standard: 2. Demographics (5 Questions)
Standard: 3. Corporate Entrepreneurial Dimensions (5 Questions)
Standard: 4. Firm Performance (1 Question)
Standard: 5. Organisational Climate (1 Question)

Page Break

Start of Block: Cover Page

Introduction

Study Topic: The contribution of corporate entrepreneurial dimensions on firm performance in South African NGOs

Dear Sir / Madam,

My name is Keshan Naidoo and I am a Master's student at the University of the Witwatersrand, Johannesburg, completing my studies in Entrepreneurship and New Venture Creation. As part of my studies, I have to undertake a research project, and, as such, I am investigating the contribution made by corporate entrepreneurial (CE) dimensions on firm performance in South African NGOs under the supervision of Dr Mc Edward Murimbika.

Corporate entrepreneurship has been suggested by various scholars as occurring when an individual or a group of individuals in an established company display behaviour that is typically practised by individual entrepreneurs. The literature supports the notion that corporate entrepreneurial practices can be implemented as a means to improve company performance, and that doing so cany result in an organisation obtaining a competitive advantage.

CE dimensions are specific characteristics that are evident in firms that embody the following: innovativeness; risk-taking; proactiveness; autonomy; and competitive aggressiveness. Therefore, the emphasis of this study is on determining the influence that the CE dimensions have on the performance of NGOs that operate in the health sector in Gauteng, South Africa.

In addition to the above, the purpose of this study is to improve the understanding of corporate entrepreneurship in South Africa, within the context of NGOs in the health industry, so that greater performance than at present can be achieved, so as to attract further growth and sustainability.

As part of this project, I would like to invite you to take part in answering a questionnaire. This activity will involve you in responding to a 7-point Likert scale, which is broken up into five sections and will take around 30 minutes for you to complete.

There will be no personal costs to you if you participate in this project, and you will not receive any direct benefits from your participation therein. In addition, you will experience no disadvantages or penalties if you do not choose to participate in it, or if you withdraw from the study. You may withdraw from the study at any time, or not answer any question that we ask if you do not want to. Your responses to the questionnaire will be completely

confidential and anonymous, as I will not be asking for your name or for any identifying information, and the information that you give me will be held securely and not disclosed to anyone else. I will be using a pseudonym (a false name) to represent your participation in my final research report.

If you have any questions during or afterwards about this research, please feel free to contact me on the details listed below. This study will be written up as a research report. If you wish to receive a summary of the report, I will be happy to send it to you. The data collected from the research project will be stored in Qualtrics, and it will be kept for five years. If you have any concerns or complaints regarding the ethical procedures followed in this study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrec-medical.researchoffice@wits.ac.za

Yours sincerely,
Keshan Naidoo

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Dr Mc Edward Murimbika, mcedward.murimbika@wits.ac.za, +27(0) 11 717 3658**End of Block: Cover Page**

Start of Block: 1. Informed Consent

Q1.1. Your participation in this study is voluntary. To participate in this survey, you will need to provide your informed consent. Please indicate your choice below.

- ○ I consent to participate in the survey, and I, further, confirm that I understand what my participation will involve. In addition, I agree that the information that I provide may be used anonymously after this project has ended, for academic purposes by other researchers, subject to their own ethics clearance being obtained. (1)

- ○ I do not consent to participate in the survey. (2)

Skip To: End of Survey If Q1.1. = 2

End of Block: 1. Informed Consent

Start of Block: 2. Demographics



Q2.1. Gender

- Male (1)
- Female (2)
- Other (3)



Q2.2. What is your current management level?

- Top management (1)
- Senior management (2)
- Middle management (3)
- Junior management (4)



Q2.3. What age group do you fall within?

- ○ 18–25 (1)
- ○ 26–35 (2)
- ○ 36–45 (3)
- ○ 46–55 (4)
- ○ 56–65 (5)



Q2.4. Race

- ○ African (1)
- ○ White (2)
- ○ Indian (3)
- ○ Coloured (4)
- ○ Asian (5)



Q2.5. What is your highest qualification?

- ○ Less than Grade 12 (Matric) (1)
- ○ Grade 12 (Matric) (2)
- ○ National Diploma (3)
- ○ National Higher Diploma (4)
- ○ Bachelor Degree (5)
- ○ Honour’s Degree (6)
- ○ Master’s Degree (7)
- ○ Doctoral Degree (PhD) (8)

End of Block: 2. Demographics

Start of Block: 3. Corporate Entrepreneurial Dimensions



Q3.1. The below declarations deal with the corporate entrepreneurial dimension of **autonomy**. Please rate the extent to which you agree or disagree with the following statements by selecting between 1 (Strongly disagree) and 7 (Strongly agree).

	Strongly Disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
Employees have enough independence in their job to do their work. (Q3.1._1)	○	○	○	○	○	○	○
Employees are motivated to be creative and to try different methods to do their job. (Q3.1._2)	○	○	○	○	○	○	○
Employees are allowed to make decisions without going through complex justification and approval procedures. (Q3.1._3)	○	○	○	○	○	○	○
Employees are stimulated to manage their own work and have flexibility to resolve problems. (Q3.1._4)	○	○	○	○	○	○	○

Employees rarely have to follow the same work procedures while performing tasks from day to day. (Q3.1._5)	○	○	○	○	○	○	○

Q3.2. The declarations below deal with the corporate entrepreneurial dimension of **innovativeness**. Please rate the extent to which you agree or disagree with the

following statements by selecting between 1 (Strongly disagree) and 7 (Strongly agree).

	Strongly Disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
The company regularly introduces new services or products or processes. (Q3.2._1)	○	○	○	○	○	○	○
Strong importance is placed on novel and innovative products or services. (Q3.2._2)	○	○	○	○	○	○	○
The number of services or products offered during the past three years has risen. (Q3.2._3)	○	○	○	○	○	○	○
The organisation is repeatedly pursuing new opportunities. (Q3.2._4)	○	○	○	○	○	○	○

Over the past three years, changes in our processes, services and products have been dramatic. (Q3.2._5)	○	○	○	○	○	○	○

Q3.3. The declarations below deal with the corporate entrepreneurial dimension of **risk-taking**. Please rate the extent to which you agree or disagree with the following statements by selecting between 1 (Strongly disagree) and 7 (Strongly agree).

	Strongly Disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
When faced with uncertain decisions, the company usually adopts a bold position in order to maximise the probability of exploiting opportunities. (Q3.3._1)	○	○	○	○	○	○	○
The company has a strong proclivity towards high-risk projects. (Q3.3._2)	○	○	○	○	○	○	○
Due to the turbulent business environment, the company believes that daring, extensive acts are necessary to achieve the business aims. (Q3.3._3)	○	○	○	○	○	○	○

Employees are often stimulated to take calculated risks about new ideas. (Q3.3._4)	○	○	○	○	○	○	○
The term ‘risk-taker’ is regarded as a positive quality for employees in the organisation. (Q3.3._5)	○	○	○	○	○	○	○

Q3.4. The below declarations deal with the corporate entrepreneurial dimension of **proactiveness**. Please rate the extent to which you agree or disagree with the

following statements by selecting between 1 (Strongly disagree) and 7 (Strongly agree).

	Strongly Disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
Our company has the tendency of changing the product or service lines. (Q3.4._1)	○	○	○	○	○	○	○
My firm regularly responds to actions which the competitors initiates. (Q3.4._2)	○	○	○	○	○	○	○
The company regularly pursues new products or services. (Q3.4._3)	○	○	○	○	○	○	○
My firm is very rarely the first company to introduce new products or services, operating technologies and others. (Q3.4._4)	○	○	○	○	○	○	○



Q3.5. The declarations below deal with the corporate entrepreneurial dimension of **competitive aggressive**. Please rate the extent to which you agree or disagree with

the following statements by selecting between 1 (Strongly disagree) and 7 (Strongly agree).

	Strongly Disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
Our business is intensely competitive. (Q3.5._1)	○	○	○	○	○	○	○
In general, our business takes a bold and aggressive approach when competing. (Q3.5._2)	○	○	○	○	○	○	○
The company successfully adopts an aggressive attitude to fight trends that may jeopardise its survival or competitive advantage. (Q3.5._3)	○	○	○	○	○	○	○
We try to out manoeuvre the competition as best as we can. (Q3.5._4)	○	○	○	○	○	○	○

End of Block: 3. Corporate Entrepreneurial Dimensions

Start of Block: 4. Firm Performance



Q4.1. The below declarations below deal with the perceived performance of the organisation in terms of **business growth**. Please rate the extent to which you agree

or disagree with the following statements by selecting between 1 (Strongly disagree) and 7 (Strongly agree).

	Strongly Disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
The company has experienced growth in terms of the number of new grants awarded over the past five years. (Q4.1._1)	○	○	○	○	○	○	○
The company has experienced growth in terms of the number of new staff appointments over the past five years. (Q4.1._2)	○	○	○	○	○	○	○
The organisation has experienced growth in terms of the number of new sites/facilities from which it operates. (Q4.1._3)	○	○	○	○	○	○	○

The competitive position of our business has improved over the past five years. (Q4.1._4)	○	○	○	○	○	○	○

End of Block: 4. Firm Performance

Start of Block: 5. Organisational Climate



Q5.1. The declarations below deal with the organisational climate in terms of the perception of **leadership**. Please rate the extent to which you agree or disagree with

the following statements by selecting between 1 (Strongly disagree) and 7 (Strongly agree).

	Strongly Disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
Management values the contribution I make. (Q5.1._1)	○	○	○	○	○	○	○
The management style of the organisation is generally participative. (Q5.1._2)	○	○	○	○	○	○	○
The management style of the organisation is generally oppressive. (Q5.1._3)	○	○	○	○	○	○	○
My immediate manager demonstrates strong leadership skills. (Q5.1._4)	○	○	○	○	○	○	○
My immediate manager does a good job at “people management”, dealing with people who work for him/her. (Q5.1._5)	○	○	○	○	○	○	○

End of Block: 5. Organisational Climate

APPENDIX B

Consistency matrix

Main Aim: To determine the contribution of corporate entrepreneurial dimensions on firm performance in South African NGOs								
Item	**Sub-aims of research**	**Literature Review**	**Hypotheses**	**Research questions**	**Variables**	**Source of data**	**Type of data**	**Analysis**
1	To determine the effect of innovativeness on firm performance To determine the moderating effects of firm climate on the relationship between innovativeness and firm performance	Nelson (1993); Hobday (2005); Boyd et al. (2014); Hornsby et al., (2013); Venter & Urban (2015) Oosthuizen (2015); Lumpkin & Dess (1996, 2001); Urban, (2016); Schumpeter (1934, 1942); Hult et al. (2004); Litwin & Stringer (1968); Argyris (1964); Venter 2014; Castro,	**H1**: There is a positive influence of innovativeness on firm performance. **H6:** Firm climate positively moderates the relationship between innovativeness and firm performance.	What is the influence of innovativeness on firm performance? What is the moderating effect of firm climate on the relationship between innovativeness and firm performance?	**IV**: Innovativeness **MV:** Firm climate **DV**: Firm performance	Survey: Online questionnaire 7-point Likert scale Questions used to measure innovativeness: **Q3.2.1 – Q3.2.5.** Questions used to measure the moderating effect of firm climate: **Q5.1.1 – Q5.1.5.** Questions used to measure firm performance: **Q4.1.1. – Q4.1.4.**	Quantitative, ordinal data (Likert scale)	SPSS and Qualtrics Correlation Pearson coefficient & multiple regression EFA and Cronbach alphas: monitoring the reliability and validity of the scale (consistency of coefficient)

		2008, Davidson, 2000.						
2	To determine the effect of risk-taking on firm performance To determine the moderating effects of firm climate on the relationship between risk-taking and firm performance	Venter & Urban (2015); Oosthuizen (2015); Lumpkin & Dess (1996, 2001); Urban, (2016); Caruana et al. (2002); Aloulou & Fayolle, 2005; Baum et al. (2007); Litwin & Stringer (1968); Argyris (1964); Venter 2014; Castro, 2008, Davidson, 2000.	**H2**: There is a positive influence of risk-taking on firm performance. **H7:** Firm climate positively moderates the relationship between risk-taking and firm performance.	What is the influence of risk-taking on firm performance? What is the moderating effect of firm climate on the relationship between risk-taking and firm performance?	**IV**: Risk-taking **MV:** Firm climate **DV**: Firm performance	Survey: Online questionnaire 7-point Likert scale Questions used to measure risk-taking: **Q3.3.1 – Q3.3.5.** Questions used to measure the moderating effect of firm climate: **Q5.1.1 – Q5.1.5.** Questions used to measure firm performance: **Q4.1.1. – Q4.1.4.**	Quantitative, ordinal data (Likert scale)	SPSS and Qualtrics Correlation Pearson coefficient & multiple regression EFA and Cronbach alphas: monitoring the reliability and validity of the scale (consistency of coefficient)
3	To determine the effect of proactiveness on firm performance	Venter & Urban (2015); Oosthuizen (2015); Urban, (2016); Rauch et al. (2009); Madsen (2007); Litwin	**H3**: There is a positive influence of proactiveness on firm performance.	What is the influence of proactiveness on firm performance?	**IV**: Proactiveness **MV:** Firm climate	Survey: Online questionnaire 7-point Likert scale Questions used to measure proactiveness:	Quantitative, ordinal data (Likert scale)	SPSS and Qualtrics Correlation Pearson coefficient & multiple regression

	To determine the moderating effects of firm climate on the relationship between proactiveness and firm performance	& Stringer (1968); Argyris (1964); Venter 2014; Castro, 2008, Sole, 2018, Davidson, 2000.	**H8:** Firm climate positively moderates the relationship between proactiveness and firm performance.	What is the moderating effect of firm climate on the relationship between proactiveness and firm performance?	**DV**: Firm performance	**Q3.4.1 – Q3.4.4.** Questions used to measure the moderating effect of firm climate: **Q5.1.1 – Q5.1.5.** Questions used to measure firm performance: **Q4.1.1. – Q4.1.4.**		EFA and Cronbach alphas: monitoring the reliability and validity of the scale (consistency of coefficient)
4	To determine the effect of competitive aggressiveness on firm performance To determine the moderating effects of firm climate on the relationship between competitive aggressiveness and firm performance	Linyiru & Ketyenya, (2017); Lumpkin & Dess (1996, 2001); Venkatraman (1989); Covin & Covin (1990); Dess & Lumpkin (2005); Litwin & Stringer (1968); Argyris (1964); Venter 2014; Castro, 2008; Sole, 2018,	**H4**: There is a positive influence of competitiveness aggressiveness on firm performance. **H9:** Firm climate positively moderates the relationship between competitiveness aggressiveness and firm performance.	What is the influence of competitive aggressiveness on firm performance? What is the moderating effect of firm climate on the relationship between competitive aggressiveness and firm performance?	**IV**: Competitive aggressiveness **MV:** Firm climate **DV**: Firm performance	Survey: Online questionnaire 7-point Likert scale Questions used to measure competitive aggressiveness: **Q3.5.1 – Q3.5.4.** Questions used to measure the moderating effect of firm climate: **Q5.1.1 – Q5.1.5.** Questions used to measure firm performance:	Quantitative, ordinal data (Likert scale)	SPSS and Qualtrics Correlation Pearson coefficient & multiple regression EFA and Cronbach alphas: monitoring the reliability and validity of the scale (consistency of coefficient)

		Davidson, 2000.				**Q4.1.1. – Q4.1.4.**		
5	To determine the effect of autonomy on firm performance To determine the moderating effects of firm climate on the relationship between autonomy and firm performance	Gard et al. (2013); Dess & Lumpkin (2005); Lumpkin & Dess (1996, 2001); Urban, (2016); Litwin & Stringer (1968); Argyris (1964), Venter, 2014; Castro, 2008; Davidson, 2000.	**H5**: There is a positive influence of autonomy on firm performance. **H10:** Firm climate positively moderates the relationship between autonomy and firm performance.	What is the influence of autonomy on firm performance? What is the moderating effect of firm climate on the relationship between autonomy and firm performance?	**IV**: Autonomy **MV:** Firm climate **DV**: Firm performance	Survey: Online questionnaire 7-point Likert scale Questions used to measure autonomy: **Q3.1.1 – Q3.1.5.** Questions used to measure the moderating effect of firm climate: **Q5.1.1 – Q5.1.5.** Questions used to measure firm performance: **Q4.1.1. – Q4.1.4.**	Quantitative, ordinal data (Likert scale)	SPSS and Qualtrics Correlation Pearson coefficient & multiple regression EFA and Cronbach alphas: monitoring the reliability and validity of the scale (consistency of coefficient)