Transformational leadership moderating the entrepreneurial orientation and firm performance relationship.

by

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ABSTRACT

Existing research have shown that the strength of the relationship between entrepreneurial orientation (EO) and firm performance is contingent. This research study seeks to determine if transformational leadership (TL) will moderate the relationship between EO and firm performance in the context of South Africa SMEs from different industries. An explanatory quantitative study of 164 SMEs from different industries were conducted to firstly determine the EO and firm performance relationship and secondly to determine the moderating effect of TL on the said relationship. The study only considered three dimensions of EO these include innovativeness, proactiveness and risk-taking. EO and its dimensions was measured using the Hughes and Morgan (2007) scale. TL was measured using an adapted MLQ-6S scale to measure TL. A linear regression analysis found a positive relationship between EO and firm performance. Risk-taking was found not to have any relation to firm performance. The moderated multiple regression was performed using PROCESS v3 within SPSS and found that TL has no moderating effect on EO and the three dimensions of EO and firm performance respectively.

A limitation of this research study is that it considered TL as a unidimensional construct that sought self-reporting insight from owner-managers of SMEs in an emerging economy.

Further studies into the contingent relationship between EO and firm performance, in an emerging market context, can use the presented results and the literature review as a foundation to further research factors the can improve the EO and the firm performance relationship.

Keywords: Entrepreneurship; Entrepreneurial Orientation; Moderation; Firm Performance; Small and Medium Enterprises.

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University.

I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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CHAPTER 1

INTRODUCTION AND RESEARCH PROBLEM

1.1 Introduction

In a continuously changing and volatile business environment, especially small business, become very susceptible to failure. The challenge for leadership in this volatile business economy is to align tangible and intangible resources to achieve the organisation's goals. Managers need to develop a new way of thinking that could adapt to this dynamic (Urban & Govender, 2000). One of the ways to foster entrepreneurial thinking is through entrepreneurial orientation (EO) which is defined as "a strategy making process that provides organisations with a basis for entrepreneurial decisions and actions with the purpose of creating a competitive advantage" (Lomberg, Urbig, Stöckmann, Marino, & Dickson 2017, p.973). EO would naturally include the environment and firm resource both tangible and intangible (Gupta & Pandit, 2012). It is leadership's responsibility to communicate the goals and ensure that the organisation has the necessary competence to navigate towards the organisation goals and performance (Aziz, Abdullah, & Tajundin, 2013). Studies considering leadership and its effect on entrepreneurship and firm performance is sparse (Engelen, Gupta, Strenger, & Brettel, 2013). Transformational leadership (TL) style has positively been linked to individual, team and organisational performance (Wang, Oh, Courtright, & Colbert, 2011). Transformational leaders through charisma appeals to followers emotions to perform in the best interest of the organisation (Northouse, 2001).

As a firm level strategy EO requires strong management of communication, processes and structures to achieve the sought performance (Engelen, Kube, Schmidt, & Christina, 2014). This study will investigate if the EO-performance can be moderated by TL in a South African context looking at different industries.

1.2 Research Motivation

1.2.1 Theoretical Context

Entrepreneurial Orientation has been distinguished from entrepreneurial processes through its five dimensions, namely – autonomy, innovativeness, risk-taking, proactiveness and organisational aggressiveness (Lumpkin & Dess, 1996). Organisations with these factors present have been proven to perform better than firms without (Wiklund & Shepherd, 2003). Although not all factors would have an equal contribution to the performance of the firm (Covin & Wales, 2012). A study by Miller (1983) found that a firm will be called entrepreneurial if it enjoys a level of innovativeness, some proactiveness and risk-taking, thereby reducing the five dimensions of EO to three. Lumpkin and Dess (1996) declared the EO-performance relationship contextual and proposed several contingent models to expand this relationship's study.

Rauch, Wiklund, Lumpkin, and Frese (2009) have through their meta-analysis identified numerous research papers that studied moderator variables to enhance or reduce the said EO-performance relationship. Identified moderators included both the internal and external factors to the organisation. The meta-analysis conducted by Rauch et al. (2009) identified the earlier research, 1980 -1990, studied external moderating factors which include the organisation's business environment, business dynamics and environmental hostility whilst later studies considered factors internal to the organisation such as firm size, firm age and market orientation however, few studies have focused on leadership and specifically transformational leadership as a moderator.

a. Transformational Leadership as a Moderator

EO as an organisation's strategic entrepreneurship strategy, will require effective implementation through transformational leadership (TL). The individual effect of EO and TL on firm performance have empirically shown positive relationships respectively. Lumpkin and Dess (1996) described EO as "the process, practice and decision-making that leads to new entry" (p.136). These functions are traditionally part of the management's responsibility as part of setting the strategic direction for the organisation. Transformational leaders reinforces follower's awareness in realising the importance of reaching organisational goals by clearly articulating the organisation's shared mission and strategic direction (Bass & Bass, 2008) .

Studies addressing the TL as a moderator in the relationship between EO-and firm performance are sparse. However, organisations led by transformational leaders have been found to be more likely to adopt an entrepreneurial strategy (Ling, Simsek, Lubatkin, & Veiga, 2008). Engelen et al. (2013) researched the moderating effect of six TL behaviours on the EO-performance relationship. This study considered six factors of TL moderating the EO-performance relationship. The study by Yang (2008) confirmed that all leadership styles will moderate the relationship between EO and firm performance, with TL being the most significant. Both studies showed a significant increase in performance with TL in the former being applied as a moderating variable and in the latter as an independent variable.

Covin and Slevin (1991) emphasized that EO should be inscribed at a firm level as this will highlight the firm's entrepreneurship focus for the different levels of the firm. According to Miller (2011), EO can be considered as a strategic firm level phenomenon, emphasising the importance of communication to the different organisational levels on how the firm will compete, when it will compete and against whom to compete should be clear and concise from the firm's leaders (Gupta & Pandit, 2012). Thus, the importance of management in achieving increased performance levels through an entrepreneurial strategy and the execution thereof. Performance in the context of this research paper looked at organisational growth, market growth, employee number increase, and to a lesser extent financial performance that would be publicly available.

Rauch et al. (2009) confirmed in their study that non-financial measures have shown a weak relation to firm peformance considering the self-reporting and potential bias. These measures are however more reliable when compared to self-reported financial data. This study looked at performance relative to other organisations in similar industries. Being a subjective measure, this study considered the entire business environment, internal and external, of the organisations.

1.2.2 Research Business Objectives

The business case of this study is motivated by the shrinking entrepreneurial activity, SME challenges, unemployment and lack of job creation by SMEs.

The GEMS (2018) reported South Africa's total early-stage entrepreneurial activity (TEA) as 11% in 2017, placing South Africa 27 out of 54 efficiency-driven economies that have an average of 14.9% TEA. TEA is a percentage measure of the adult population who initiated a business venture or have been operating a business for less than 42 months (Global Entrepreneurship Research Association, 2018). South Africa's youth

participation in entrepreneurship has decreased more than 40%, when compared to 2015 in the age group 25-34 years, this number has placed SA 58th out of 65 economies (Herrington, Kew, & Mwanga, 2017). The SA economy has however seen an increase in 45-54 year-old entrepreneurs. This is due to them being older workers and being made redundant and facing bleak job prospects (Herrington et al., 2017).

According to Herrington et al. (2017), it can be expected that approximately 60% of early stage entrepreneurs would in the next five years create between one and five new jobs. However, 67% of SMEs in 2016 closed doors, for financial reasons, either profitability or access to finance needed for growth and expansion or merely sustainability. This is also a reflection of the leadership ability to navigate the organisation through difficult times (Herrington et al., 2017). According to the Herrington et al.'s (2017) report, South Africa has the lowest entrepreneurial intention when compared to other countries in Africa. It is the opinion of many industry experts that the small business industry is over-regulated thus, constraining SMEs who are focusing their energy on surviving in the sector.

Government having realised the importance of SMEs in the economy have written into the National Development Plan (NDP) specific plans around SMEs and their support for growth and sustainability. SMEs have been earmarked as the lead employer that will create eleven million jobs in South Africa and achieve an annual GDP growth of 5.4% by 2030 (National Planning Commission, 2011). To address the challenges faced by SMEs, government established the department of small business development under the leadership of Minster Lindiwe Zulu. However, this department had further challenges brought on by corruption and red tape and was unsuccessful in fulfilling its mandate. The challenges faced by South African small businesses are not unique and are both internal and external to these organisations.

Job creation through entrepreneurial activity ensure inclusive growth, that will lead to reduced poverty, a reduced income gap and better economic growth. In unison with job creation, firms need to adopt an innovative culture that continuously introduce new or improved existing products and services that they offer to their customers. Continuous navigation of the environment and the exploitation of gaps in the market, by management, will give firms first mover advantage and allow them to collect monopoly rent on their competitive advantage (Engelen et al., 2014). The unemployment rate in South Africa has reached critical proportions at 27.5% in quarter three of 2018, with 32.4% of the youth (15-24 years) not employed, educated or trained. (StatsSA, 2018). Small and medium-sized enterprises (SMEs) is of significant importance to any economy as they create employment for millions of people, especially the unskilled labour market

(Cant & Wiid, 2013). According to SEDA (2018) the number of people employed by SMEs is 6.44 million (73%) a 20% decline from the fourth quarter 2017 report, with the largest contraction happening in the 25-34 year old age bracket.

Growth in entrepreneurship across the world has been exceptional motivated by necessity and opportunity (Global Entrepreneurship Research Association, 2018). The global entrepreneurship monitor of 2017, GEMS, have identified school level entrepreneurship training, government bureaucracy, taxes and R&D as a stifling block for entrepreneurial activity (Global Entrepreneurship Research Association, 2018). These factors have remained unchanged since 2016.

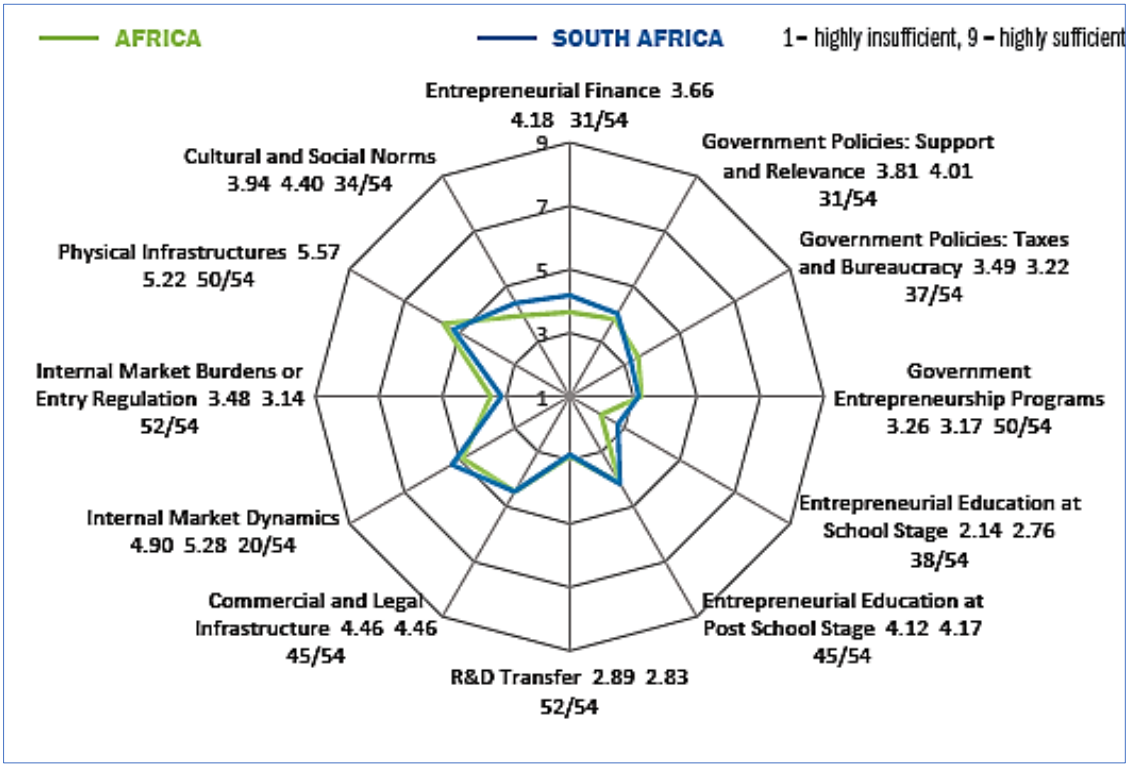


Figure 1. Expert ratings of the National Framework

Source: (Global Entrepreneurship Research Association, 2018)

The data presented from both the GEMS (2018) and the Herrington et al. (2017) reports and highlighted in Figure 1, shows government's inability to create a business environment that would enable entrepreneurs to grow their businesses and create jobs. Figure 1 shows South Africa's approach to entrepreneurship compared to the rest of Africa. The continent in general has not stimulated or enabled an environment that promotes entrepreneurship. For some owner-managers the investment of both tangible and intangible assets is difficult especially in an economy that does not support or enable small business growth and sustainability. Apart from a conducive environment,

sustainability and the performance are also representative of good management practice (Blackburn, Hart, & Wainwright, 2013).

Business leaders can benefit from understanding how an entrepreneurial strategy can benefit their organisation. Transformational leaders, using their charisma can successfully communicate the organisation's goals and get buy-in from their followers (Banks, McCauley, Gardner, & Guler, 2016). With the entrepreneurship strategic orientation and the correct leadership these small companies could be better placed to exploit opportunities that exist in their environment.

1.3 Research Aim

The difficult economic environment has made business performance and sustainability significantly difficult. Owner-managers have to consider how to manage the very scant commodities and resources, to achieve the best performance of the organisation. Knowing and understanding how to develop the first mover advantage and exploiting the advantages through premiums of the niche products in niche markets before competitors enter the market ensure a competitive advantage. Leaders should be aware and able to identify the competence and skills that are inimitable within their resources. Adoption of entrepreneurial strategy may not be enough to distinguish a firm from all others in the industry. EO as a strategic entrepreneurial orientation should be managed carefully to extract maximum benefit from the strategy (Wales, Gupta, & Mousa, 2013). The aim of this research is to contribute to the entrepreneurship and leadership literature by exploring the moderating effect of TL on the EO and firm performance relationship. Furthermore, this research's objective is to add to the increasing literature on how to improve the improvement strategy, sustainability and performance of SMEs.

1.4 Research objectives

The principal objective of this research is to investigate the how TL will moderate the contingent relationship of EO and firm performance specifically focusing on SMEs located in different regions in South Africa.

The main objectives of this study are:

1. ***To investigate and confirm the influence of EO on SME performance.***

2. ***To investigate the moderating effect of TL on the relationship between EO and SME performance.***

The study will determine if the targeted firms that have incorporated EO as a strategy will demonstrate better performance when compared to organisations that abstain from an EO strategy (Wiklund & Shepherd, 2003). Furthermore, the study determined if TL moderate the said relationship. The study only considered the following EO factors:

- Innovativeness
- Risk-taking
- Proactiveness

Transformational leadership was be measured using the Northouse (2001) Multifactor Leadership Questionnaire Form-6s (MLQ-6S). The questionnaire measures the four dimensions that makeup the TL construct, namely:

- Idealised Influence;
- Individualised consideration;
- Intellectual simulation;
- Inspirational motivation.

Performance of the organisation is a subjective dependent variable that is based on the opinion of the owner-manager. The study will consider both financial and non-financial measures as a comparison to other similar organisations in the industry.

1.5 Research Contribution

The objective of this is contribute toward the field of entrepreneurship and leadership and how these constructs can influence the performance of SMEs in a South Africa context. The research will examine the relationship that exists between EO and firm performance. Furthermore, this study will look at the moderating effect of the TL on the innovativeness, risk-taking and proactiveness, factors of EO. The research will consider organisations that have been established in their respective industries. Only SMEs will be considered for this research, as this will offer homogeneity to the data being collected. The performance criteria considered the organisational growth in terms of market share, employee number and return on assets.

1.6 Conclusion

The research problem is summarised in this chapter. Furthermore, a short background of the SME sector and difficulties it experiences within the South African context is provided. The NDP targets were introduced and the government's efforts to assist the small business industry as discussed. Findings from the 2018 Global Entrepreneurship Research Association were introduced to look at challenges faced by South African entrepreneurs. The theoretical significance of the research is covered by specifically looking at research around moderating the EO-performance relationship.

The research variables are introduced namely EO and its three factors as the independent variable and firm performance as the dependent variable. Leadership in general and its significance with regard to the organisations sustainability and performance are highlighted. TL is subsequently introduced as the moderator variable in the EO-performance relationship

1.7 Document Layout

This document is arranged as follows:

Chapter 2 presents a comprehensive literature review and investigates the relationships between the constructs.

Chapter 3 introduces the research objective, hypotheses and relationships between constructs.

Chapter 4 covers the research methodology that was followed to acquire and analyse the results of this quantitative study.

Chapter 5 presents the results obtained during the quantitative data analysis.

Chapter 6 provides a discussion on the results obtained and how the results relate to the literature reviewed and the hypothesised relationships

Chapter 7 presents a conclusion of findings from the research, the implications for business and academia and limitations of the study, with recommendations for future research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Chapter 1 discusses the aim, academic and business purposes of the research study. This research was conducted to investigate if TL style can be introduced as a moderating variable in the EO and SME performance relationship. Several researchers have identified leadership and EO as constructs that could positively affect the performance of a firm (Alrowwad, Obeidat, Tarhini, & Aqqad, 2016; Wang, Holmes, Oh, Zhu, 2011; García-Morales, Jiménez-Barrionuevo, & Gutiérrez-Gutiérrez, 2012; Katou, 2015; Yang, 2008). The strength of these relationships are however contingent on moderating or mediating factors internal and external to the organisation.

This literature review section will study the variables of EO, TL and firm performance. Lumpkin and Dess (1996) confirmed in their research the existence of a significant EO and firm performance relationship. The strength of this relationship was found to be dependent on both internal and external factors of the organisation (Lumpkin & Dess, 1996). Lumpkin and Dess (1996) found EO was described by five dimensions namely innovativeness, proactiveness, risk-taking, autonomy and competitive aggressiveness. Rauch et al. (2009) in their meta-analyses looked at different studies that introduced moderator variables into the relationship. These constructs and their relationships will be reviewed, leading to the conceptual framework for this research. The moderator variables and its results that were studied for more than twenty years are presented.

Given the limitation of resources for SMEs, both tangible and intangible, the study will adopt a resource-based view of a firm and look at the performance of firms. This study introduces TL by using the insights from the upper echelon theory to determine its moderating effect on the EO-performance relationship. The four dimensions of TL: idealised influence, inspirational motivation, intellectual stimulation and individualised consideration are briefly discussed (Bass & Bass, 2008).

2.2 Theories

2.2.1 Resources based view

This research focussed on the internal resources of the SMEs and how these influences the performance of an SME. This study therefore used insights from the Resource Based View (RBV) to improve the performance and competitive advantage of SMEs by introducing EO as an intangible resource. A second intangible resource, TL, is introduced as a moderating variable in the relationship between EO and firm performance.

According to Barney (1991), resources that are “valuable, rare, inimitable, and non-substitutable” are distinguishing characteristics that can give an SME competitive advantage (p.106). Kellermanns, Walter, Crook, Kemmerer and Narayanan (2016) have in their research improved the understanding of resources for entrepreneurs and underlined their significance in the functioning and performance of organisations. A firm will deploy its tangible and intangible resource that are difficult to imitate or duplicate to give it a competitive advantage (Wiklund & Shepherd, 2003). The intangible resources of a firm will include processes, specific skills, entrepreneurial orientation, marketing orientation, leadership style and learning orientation (Lonial & Carter, 2015). Tangible resources include a firm’s physical assets that are used to convert raw material into product or deliver a service to a customer (Wiklund & Shepherd, 2003).

Procedural knowledge, strategy formulation, and charisma allows transformational leaders to motivate employees by appealing to their emotions, to prioritise the needs of others and the organisation to work towards the company’s goals in pursuit of improved firm performance (Wiklund & Shepherd, 2003). Effective motivation and appealing emotively to employees cultivates trust that will result in enhanced performance by employees (Zhu, Chew, & Spangler, 2005).

Barney (1991) suggested that SMEs have an assortment of distinctive resources and competencies that, when combined in a specific manner, will result in superior firm performance. EO has in several research papers been identified as one of these competencies that will improve SME performance (Abebe, 2014; Arshad, Rasli, Arshad, & Zain, 2014; Lisboa, Skarmeas, & Saridakis, 2016; Semrau, Ambos, & Kraus, 2016; Van Doorn, Jansen, Van Den Bosch, & Volberda, 2013). Wiklund and Shepherd (2005) have highlighted the resource intense nature of EO as a firm’s entrepreneurial strategy that does not always lead to firm performance due to a shortage of resources, for example finance. SMEs have limited finances and would preferably spend it on projects that would

directly benefit the competence of the organisation to improve output. Small firms are very risk averse accentuating their lack of financial capital to invest in high risk high return investments (Lumpkin & Dess, 1996). Finance conversely, as a finite resource, can significantly improve a firm's ability to perform as finance can be used to acquire any resource to fulfil an organisations strategic goals (Wiklund & Shepherd, 2005).

2.2.3 Upper Echelon Theory

An organisations top executive will determine the direction of an organisation (Hambrick & Mason, 1984). Upper echelon theory is based on " executive cognitive base, values and perception and their influence on process of strategic choices and performance outcomes" (Carpenter, Geletkancz, & Sanders, 2004 p. 750). Hambrick and Mason (1984) asserted in their research that an organisation becomes an image of its management team. The strategic influence of organisational leaders can lead to organisational performance that is driven by managements' values and influence on resources (Hiebl, 2014). Research by Sattayaraksa and Boon-itt (2018) confirmed transformational leadership styles as a catalyst to innovation that will result in improved organisational performance. Wang et al, (2016) revealed in their meta-analysis that a CEO's characteristics, such as education and personality, are positively linked to the performance, through the CEO's strategic decision making and action that will influence resources to meet the organisational goals. Therefore, upper echelon theory is suitable in this study as transformational leaders are pivotal in the adoption of an entrepreneurial strategy.

2.3 Small Medium Enterprises

Defining an SME depends on the business' location in the world and the type of industry they operating in (The Bank Association South Africa, 2016). The only commonality all definitions speaks to are firm's assets, turnover and firm size, referring to number of employees. SMEs are categorised as the upper and more formalised business segment where SMME are concentrated on the lower end of the industry, informal traders (Bureau for Economic Research, 2016).

The following table extracted from banking association of South Africa, where a study was conducted to specify the criteria for SMEs in different sectors.

Table 1. SME Definition for Sector in South Africa

Sector or subsector in accordance with the standard Industrial Classification	Size of class	The total fulltime equivalent of paid employees	Total turnover	Total gross asset value (fixed property excluded)
Agriculture	Medium	100	R5m	R5m
	Small	50	R3m	R3m
	Very	10	R0.50m	R0.50m
	Micro	5	R0.20m	R0.10m
Mining and Quarrying	Medium	200	R39m	R23m
	Small	50	R10m	R6m
	Very	20	R4m	R2m
	Micro	5	R0.20m	R0.10m
Manufacturing	Medium	200	R51m	R19m
	Small	50	R13m	R5m
	Very	20	R5m	R2m
	Micro	5	R0.20m	R0.10m
Construction	Medium	200	R26m	R5m
	Small	50	R6m	R1m
	Very	20	R3m	R0.50m
	Micro	5	R0.20m	R0.10m
Retail and Motor Trade and Repair Services	Medium	200	R39m	R6m
	Small	50	R19m	R3m
	Very	20	R4m	R0.60m
	Micro	5	R0.20m	R0.10m
Wholesale Trade, Commercial Agents and Allied Services	Medium	200	R64m	R10m
	Small	50	R32m	R5m
	Very	20	R6m	R0.60m
	Micro	5	R0.20m	R0.10m
Catering, Accommodation and other Trade	Medium	200	R13m	R3m
	Small	50	R6m	R1m
	Very	20	R5.10m	R1.90m
	Micro	5	R0.20m	R0.10m
Transport, Storage and communications	Medium	200	R26m	R6m
	Small	50	R13m	R3m
	Very	20	R3m	R0.60m
	Micro	5	R0.20m	R0.10m

Source (The Bank Association South Africa, 2016)

Small business enterprise (SME) are categorised and defined according to table 1. South African businesses are classified as micro-, very small, small or medium enterprise (The Bank Association South Africa, 2016). The businesses are further defined according to the total fulltime equivalent of paid employees, total turnover, total gross asset value

(excluding fixed property) and the category of operation (The Bank Association South Africa, 2016).

According to the *National Small Business Act of 1996 amended by section 1 of Act 26 of 2003* defines an SME as:

> "… a separate and distinct business entity, together with its branches or subsidiaries, if any, including co-operative enterprises (and non-governmental organisations), managed by one owner or more, carried on in any sector or subsector of the economy …" (Department of Trade and Industry, 2004 p.3)

From the definition of it, it is clear according to, *National Small Business Act of 1996 amended by section 1 of Act 26 of 2003,* the terms SMEs and SMMEs are used interchangeably in the context of South Africa, although there is a clear distinction in the criteria for each (Republic of South Africa, 2004).

SMEs in this study were defined as organisations that have 200 or less employees, annual turnover, total asset value as per Table 1.

2.4 Entrepreneurial Orientation

EO as an organisational strategy has been the subject of countless research papers (Fernández-Mesa & Alegre, 2015; Lomberg et al., 2017; Semrau et al., 2016; Shirokova, Bogatyreva, Beliaeva, & Puffer, 2016). It has also been identified as the driving force behind an organisation's pursuit of entrepreneurial activity and has seen significant research in the field entrepreneurship studies (Covin & Wales, 2012). Having its roots in strategy-making, EO will represent the organisation's entrepreneurial decision through policies and procedures that would lead to organisational vision, sustainability and create a competitive advantage for the organisation (Rauch et al., 2009). Covin and Lumpkin (2011) has however, argued that entrepreneurship is driven by the behaviour in the firm rather than a predetermined or planned behaviour. . Thus employees' acceptance of EO through all levels of the organisation will allow greater benefit through all functional areas (Wales, Monsen, & McKelvie, 2011). However, stimulation may not be interchangeable between functional levels and should therefore be customised to suite the organisational culture. Anderson, Kreiser, Kuratko, Hornsby and Eshima (2015) concurred that EO is a second-order firm level variable that is made-up of two lower order propositions the first being a firm's behaviour, consisting of innovation and proactiveness and entrepreneurial

behaviour. The second is an attitudinal dimension, the firm's propensity to risk or managers' risk appetite and how it is dealt with (Anderson et al., 2015).

Miller (1983) and Covin and Lumpkin (2011) confirmed EO can only exist in an organisation in the presence of the three dimensions namely, innovativeness, risk-taking and proactiveness. Lumpkin and Dess (1996) added competitive aggressiveness and autonomy to extend the dimension of EO to five (Covin & Wales, 2012). This research will however, only innovativeness, proactiveness and risk-taking. These factors will give a firm first mover advantage ensuring they can extract monopoly rents giving the firm a superior performance advantage and if the product is accepted, good business sustainability (Semrau et al., 2016).

2.4.1 Innovativeness

Innovativeness from the perspective of entrepreneurship would be at firm level and can be defined as an organisation's response to business environment. An organisation's support of new ideas, creativity, experimentation and newness and/or improvement to processes or products or pursuit of new markets is seen as that organisation's innovativeness (Rauch et al., 2009). Innovation on the other hand is an organisation's disposition to deviate from the norm and explore a renewed state, and moving away from established technologies and processes thereby making these firms leaders in research and development (R&D) (Gupta & Pandit, 2012; Lumpkin & Dess, 1996).

Research and development and innovation can be resource taxing, both in terms of cost and other resources, it does however lead to organisational growth and performance (Salavou, 2004). Lumpkin and Dess (1996) have in their research suggested innovativeness occurs along a continuum from experimenting with new products or exploring new markets to investing effort and passion to master the newest technologies. Innovativeness can take on different forms between organisations such as, technology innovation or product innovation, leading to the uniqueness of the organisation's resources.

2.4.2 Proactiveness

"Proactiveness is an opportunity-seeking, forward-looking perspective characterised by the introduction of new products and services ahead of the competition and acting in anticipation of future demand" (Rauch et al., 2009: p. 763). A firm's proactiveness gives it first mover advantage in a market thereby cementing its position as a leader in an industry. Proactive firms can shape an industry and create market demands, allowing

them to enjoy monopoly rent and controlling demand. These firms capitalise on emerging opportunities, by exploring and exploiting opportunities for new products and/or services through innovation in their current markets, or by entering new markets (Vora, Vora, & Polley, 2012; Wiklund & Shepherd, 2005). Proactiveness is a crucial entrepreneurial characteristic as it allows forward looking and action through the innovative character (Lumpkin & Dess, 1996).

2.4.3 Risk Taking

Risk-taking shows a company's disposition to pursue untested and unproven solutions in the pursuit of the unknown (Wiklund & Shepherd, 2003). Rauch et al. (2009) defined risk-taking firms as firms that venture into the unknown, borrow heavily or commit resource without a clear indication of return on commitment or investment, both financially and non-financially. Although there may be no clear indication of return on investment (ROI), risks will always be calculated followed by a comprehensive risk analysis and weighing the risk outcomes against the benefits that may arise from the transaction.

No firm can operate without risk, merely being active in the business market poses a risk for entrepreneurs (Rezaei & Ortt, 2018). The level of risk can be differentiated between low and high risk depending on the organisation. A firm taking on massive debt to increase market a product that could potentially result in higher returns cannot be guaranteed (Lumpkin & Dess, 1996). Organisations wanting to perform in an environment will ensure a measure of risk as it is a precursor to innovation. Risk in terms of EO will result in improved firm growth and ultimately improved firm performance (Lumpkin & Dess, 1996). However, Rezaei and Ortt (2018) postulated the effect of risk taking will not impact all levels at the same time, production may see the effects immediately, whilst sales and marketing may see a lagged effect after some time. The effect of risky decisions in the R&D space could have lingering effect for organisation (Lisboa et al., 2016).

2.5 Firm Performance

SME performance in emerging markets have become vital to their survival due to the lack of regulatory support and external competition due to the open South African economy (Le Roux & Bengesi, 2014). Organisational performance is a subjective dependent variable as the industry, organisational strategy, geographic location, age and

size of the firm determine the performance of an organisation (Arshad et al., 2014). Performance measures, unless publicly available would normally be known by the owner-manager of the firm thereby introducing a measure of bias into the result. Additionally, organisational performance is viewed as a reflection of a manager's ability to successfully manage the organisation and his or her ability to successfully perform in their selected role and industry (Yang, 2008). Alrowwad et al. (2016) and Arshad et al. (2014) confirmed the difficulty in collecting objective data from SMEs.

Inappropriate measures can give misleading results on organisational performance and lead to incorrect strategies for performance and sustainability (Arham, 2014). Arham (2014), Semrau et al. (2016) and Yang (2008) have in their research used organisational growth and profitability as performance indicators. Financial or non-financial measures can be used as proxies for firm performance (Rauch et al., 2009). Financial results such as return on investment, profits, earnings before interest and tax and financial leverage are measures calculated from the firm's financial statements that indicate the performance and when compared to other financial years, that can represent the growth of the firm. Non-financial measures include firm market share growth, employee satisfaction and company achievement measured against specific set goals (Rauch et al., 2009).

This study used firm growth as non-financial and profitability as financial firm performance proxies. Rauch et al (2009) confirmed through their meta-analysis that non-financial measures have shown a weak relation to firm peformance, being mindful of the self-reporting and potential bias.

2.6 Entrepreneurial Orientation and SME Performance

Various researchers have studied and proven the positive relationship between EO performance of SME (Abebe, 2014; Arshad et al., 2014; Lisboa et al., 2016; Semrau et al., 2016). In this fast changing and dynamic market companies need to develop agile strategies that would see changes in products as customers' needs change. This dynamism of the market will result in a short product life that, through the adoption of EO will ensure continuous innovation and firm sustainability. Smaller firms consider business continuity as performance (Wiklund & Shepherd, 2003). There is however agreement that appropriate management of EO within the organisation will result in sought after benefits (Engelen et al., 2013).

The strength of the EO-performance relationship has been shown to be contingent and have been highlighted by many different studies (Rauch et al., 2009; Engelen et. al., 2013, 2014, Shirokova et al., 2016)). Lumpkin and Dess (1996) posit in their research the contingent EO and firm performance relationship and has put forward contingent models to study the variability of the EO-performance relationship. This research study will investigate if TL can be used to moderate the EO -performance relationship.

2.7 Transformational Leadership

Transformational leaders motivate employees to achieve organisational goals through trust and motivation (Bass, 1995). These leaders reinforces the awareness of followers in realising the importance of reaching organisational goals, instead of focusing on self-interest as followers are being made to feel part of the organisational decision structure (Katou, 2015). Bass (2008), describes the transformational leader as someone that elevates followers' awareness of maturity, ideals and empathy of others and the organisation. According to Antonakis, Avolio and Sivasubramaniam (2003) and Northouse (2001) transformational leadership can be hypothesised by the following four factors:

- Idealised influence (II) portrays the socialised charisma of the leader that articulates the organisation's vision. Charismatic leaders excite and encourage followers to achieve greater goals and appeal to followers on an emotive level (Judge & Piccol, 2004). These leaders have high ethical and moral values and personalities that draw people to follow them (Northouse, 2001);
- Inspirational motivational (IM) leaders communicate goals in a clear and concise manner and create optimism for the future. These leaders set clear, high standard and achievable goals that need to uplift their followers (Judge & Piccol, 2004);
- Intellectual stimulation (IS) encourages followers to think creatively and take risks by challenging existing assumptions and solving problems in innovative and unique ways thereby encouraging them to be creative (Northouse, 2001);
- Individualised consideration (IC) describes the individual attention leaders give followers, ensuring to address follower needs for achievement, growth and personal wellbeing (Judge & Piccol, 2004).

Transformational leadership, according to Northouse (2001), forms part of the "New Leadership paradigm that gives attention to the charismatic and effective elements of leadership" (p.161). The evolution of workforce has steered leadership towards transformational leadership that empower and develop followers in a dynamic and agile

business environment (Northouse, 2001). Transformational leadership leads to the growth, development and empowerment of followers, resulting in self-confidence and belief in ability that will result in improved work delivery that go beyond set targets and goals (Kark, Shamir, & Chen, 2003).

Podsakoff, Mackenzie and Moorman (1990) initially posited the multidimensionality of the transformational leadership and found six behaviours linked to this leadership style, these include:

- *Identifying and articulating a vision*

  The leader's ability to identify new opportunities for the organisation and motivating and communicating a vision to the employees.

- *Providing and appropriate model*

  The exemplary behaviour on the part of the leader serving as an example to employees.

- *Fostering the acceptance of group goals.*

  The promotion of teamwork within the group and getting acceptance of the common goal.

- *High performance expectations*

  Leaders set high but achievable goals for employees delivering to high quality and standards.

- *Providing individualised support*

  Awareness of employees' personal needs and feelings

- *Intellectual stimulation*

  Leaders should create an environment that challenges employees to approach challenges with different solutions and ideas and to be innovative and creative when approaching their work.

These behaviours were used as moderators in the research study by Engelen et al. (2013) and found that four of the six factors moderated the EO-performance relationship.

2.7.1 Transformational Leadership and Firm Performance

TL style has greater effect in improving an employee's performance when compared to other leadership styles, resulting in improved business performance (Aziz et al., 2013). The trusting environment created by transformational leaders creates an environment where employees do more than what is expected, thereby improving firm performance (Engelen et al., 2013). Arham, (2014) posits that good and effective leadership can positively affect the performance of an organisation. The studies by Joo and Lim (2013) and Zhu, Chew and Spangler (2005) show a positive correlation between employee job and TL in an organisation, results were based on 427 employees and 170 firms respectively. These studies confirmed that transformational leadership improves the performance of an organisation with the company CEO playing a vital role in achieving the performance

Innovation is promoted by communication from the transformational leader, whilst acting as a catalyst and facilitator for organisational learning through the interaction (García-Morales et al., 2012). The different studies have shown the complex nature of TL as a construct and how it can directly or indirectly affect organisational performance. The hyper-competitive nature of the modern business environment makes leading very challenging as organisations need to adopt strategic agility, a paradox, that is necessary for modern business survival (Lewis, Andriopoulos, & Smith, 2014). TL through its emotive nature allows fast dissemination of information and quick adaptation to achieve the organisation's strategy, thus improving organisation performance in dynamic environments (Ensley, Pearce, & Hmieleski, 2006).

Table 2. Summary of Studies Considering Moderating Variables in the EO-Performance Relationship.

Author/year	Independent Variable	Dependant Variable	Moderator Variable	Findings
Covin and Slevin (1988)	• EO	• Firm Performance	• Organisational Structure	• EO top management style positively(negatively) affects performance of organically (mechanistically) structured firms.
Becherer and Maurer (1997)	• EO • Marketing orientation	•Firm performance •Marketing orientation	• Environmental turbulence • Environmental hostility	• Marketing orientation an EO are positively and significantly correlated. • EO positively impacts firm performance • Environmental turbulence and hostility quasi-moderate the relationship between marketing orientation and EO
Barret and Weinstein (1998)	• EO • Firm Flexibility • Market orientation	•Firm performance •Firm flexibility •Market orientation	• EO • Firm flexibility • Market Orientation	• EO, flexibility and market orientation are all positively correlated with each other and with firm performance.
Lee, Lee and Pennings (2001)	• EO • Technological capabilities • Social capital • Financial resources	• Firm Performance	• External Networks	• EO positively affects performance.
Lumpkin and Dess (2001)	• EO (proactiveness and competitive aggressiveness) • Environment • Stage of industry life cycle	• Firm Performance	• Environmental dynamism • Environmental hostility • Stage of industry life cycle	• Proactiveness is positively related to firm performance. • Competitive aggressiveness is poorly related to performance. • Competitive aggressiveness is helpful in the mature stages of an industry. • EO dimensions vary independently.
Wiklund and Shepherd (2003)	• Knowledge-based resources • EO	•Firm performance	• EO	• EO enhances the positive relationship between knowledge-based resources and firm performance. • EO positively affects firm performance.

Dimitratos, Lioukas and Carter (2004)	• EO	•International performance	• Domestic environment • Foreign environment	• There is a positive relationship between entrepreneurship and international performance that is positively moderated by the level of uncertainty in the domestic country.
Richard, Barnett, Dwyer and Chadwick (2004)	• Cultural diversity (race and gender)	•Firm performance	• EO	• Innovativeness positively and risk -taking negatively moderate the nonlinear relationship patterns between racial and gender heterogeneity and firm performance.
Wiklund and Shepherd (2005)	• EO	•Firm performance	• Environmental dynamism • Access to financial capital	• EO positively influences firm performance • EO positively influences firm performance when companies face severe constraints like limited financial resources and a stable environment.
Covin, Green and Slevin (2006)	• EO	• Firm Performance	• Participation in strategic decision-making, • Mode of strategy formation • Strategic learning from failure	• The EO-performance relationship is positive. • The EO-performance relationship is more positive when firms employ autocratic decision-making and exhibit an emergent strategy-formation process.
Lumpkin, Wales and Ensley (2006)	• EO	• Firm Performance (revenue and employee growth)	• Firm age	• Age negatively moderates the relationship between risk-taking and performance • Age positively moderates the relationship between competitive aggressiveness and performance.
Walter, Auer and Ritter (2006)	• EO	• Firm Performance	• EO	• A spin-off's EO fostering competitive advantages. • Network capabilities strengthen the relationship between EO in and spin-off performance.
Moreno and Casillas (2008)	• Strategy • EO	• Firm growth strategy	• Environmental dynamism • Environmental hostility	• There is no significant relationship between EO and firm growth • Greater EO favours the use of expansion strategies.

	• Environmental dynamism • Environmental hostility		• Expansion based on new products and technology • Availability of resources	
Runyan, Droge and Swinney (2008)	• EO • Small Business Orientation	•Firm performance	• Longevity	• EO and small business orientation are unique constructs • EO is positively associated to the firm performance of only younger firms • Longevity moderates the relationship of EO and of SBO to small business performance.
Stam and Elfring (2008)	• EO	•Firm performance	• Intra-industry social capital • Extra-industry social capital	• Bridging ties positively moderates the EO-performance relationship. • For firms with high levels of bridging ties, the EO-performance relationship is stronger when network centrality is high.
Richard, Wu and Chadwick (2009)	• EO	•Firm performance	• CEO's position tenure • CEO's industry tenure	• EO positively affects the firm performance • CEO's industry tenure positively and CEO's position tenure negatively moderate this relationship.
De Clercq, Dimov and Thongpapanl (2010)	• EO	•Firm performance	• Internal social exchange process	• EO is positively linked to firm performance. • The EO-performance link is stronger for higher levels of procedural justice, trust, and organisational commitment and when the organisational social context comes closer to an "ideal".
Chririco, Sirmon, Scioscia and Mazzola (2011)	• EO • General involvement • Participative strategy	•Firm performance	• EO • General involvement • Participative strategy	• EO and participative strategy have positive effects on performance. • EO and generational involvement interact to affect performance negatively.

Su, Xie and Li (2011)	• EO	•Firm performance	• Firm type (new venture vs established firm)	• The EO-performance relationship has an inverse U shape in new ventures but is positive in established firms.
Chaston and Sadler-Smith (2011)	• EO • Firm performance	•Firm capability •EO •Sales growth	• Market conditions	• In highly intense markets, firms with a low EO show the lowest growth, whereas firms with high EO show the highest growth.
Kraus, Rigtering, Hughes and Hosman (2012)	• EO	•SME business performance	• Market turbulence	• Only proactiveness has a direct impact on performance. • The interaction of innovativeness with turbulence is significantly positive • The interaction of risk taking with turbulence is significantly negative.
Engelen et al. (2013)	• EO	•Firm performance	• Transformational leadership behaviour	• EO is positively associated with firm performance. • This relationship is positively moderated by four transformational behaviours, regardless of national setting. • The higher top management scores on all transformational leadership behaviours, the greater EO's performance consequences.
Anderson and Eshima (2013)	• EO	• SME firm growth	• Firm age • Intangible resources	• The relationship between EO and firm growth is strongest among younger SMEs. • Higher levels of intangible resources relative to industry rivals positively strengthen the EO-performance relationship. • The relationship between EO and firm growth is strongest among younger SMEs that have higher levels of intangible resources than their peers.
Engelen et al. (2013)	• EO	• Firm performance	• CEO narcissism	• EO is positively associated with firm performance. • This relationship is weakened when the CEO has narcissistic traits.

Engelen et al. (2014)	• EO	• Firm performance	• Absorptive capacity	• EO-performance relationship is positive when absorptive capacity is high.
Brouthers, Nakos and Dimitratos (2015)	• EO • Research alliances • Marketing alliances	• International performance	• Marketing capabilities • R&D	• EO is significantly link to International performance • Firm with R&D capabilities participating in foreign research alliances improve EO application and lead to higher international performance. • Participation in marketing alliances increase EO application resulting in increased international performance.
Kurtulmuş and Warner (2015)	• EO	• Financial Performance	• Business environment	• Increased EO activities does not amount to increase financial performance. The study attributing the performance on the environment and the overall financial position.
Martin and Javalgi (2016)	• EO	• Marketing capabilities	• Competitive intensity	• Competitive intensity in the International new venture market moderates the EO and marketing capabilities relationship. As the competitive intensity increase the relationship becomes stronger.
Deligianni, Dimitratos, Petrou and Aharoni (2016)	• EO	• International Performance	• Decision Making Rationality	• Firms practising EO that pursue rational decision-making in strategic decision making will have improved international performance.
Şahin and Gürbüz (2017)	• EO	• International Performance	• Cultural Intelligence	• EO and international performance is highly contingent on top manager's cultural intelligence.
Luu (2017)	• Ambidextrous leadership • EO	• EO • Operational Performance	• Organisational social capital • Organisational size • Organisational age • Ownership	• Ambidextrous leadership and EO relationship is enhanced if the moderator, OCS, is high. • EO-operational performance relationship is increased as the organisational size increase. • EO-operational performance is affected by the firm ownership, results indicating foreign owned firms has higher performance. • There is no relationship between EO-operational performance and the organisational age.

Adapted from Engelen et al. (2014)

2.7.2 Transformational Leadership Moderating EO and Firm Performance

This research will focus on an internal resource by examining the moderating effect the TL style of owner-managers would have EO-performance relationship in SMEs. A study by Engelen, Gupta, Strenger and Brettel, (2013) showed transformational leadership positively affects the EO-performance in a firm irrespective of the national setting. Thus, the premise of this study is that TL behaviour would enhance the EO-performance relationship. The consideration of leadership as a moderating variable ties in with the RBV theory that highlights the importance of internal resources, to the firm in the EO-performance relationship (Engelen et al., 2014).

The intensity of the EO and firm performance relationship are contingent and is dependent on different factors highlighted in the research by Rauch et al. (2009). Table 2 was adapted from Engelen et al. (2014) which included work by Rauch et al. (2009) and extended to included more recent studies that looked at moderator variables in the EO-performance relationship. The table identifies the dependent, independent and moderator variables from different studies. These studies clearly show the internal and external focus and the tangible and intangible factors as moderating variables through the different periods of EO-performance research.

The presented table clearly shows the scant research considering leadership as a moderating construct in the EO-performance relationship. The research by Engelen et al. (2013) found that the four factors of TL positively moderate the EO-performance relationship. A second paper considering organisational leadership was by Richard, Wu and Chadwick (2009) that considered the CEO position and industry tenure. The EO dimensions are as presented in Lumpkin and Dess (1996) and can vary in an organisation however these factors are driven by the management of the organisation (Gali, Hughes, Mallet, & Karam, 2016). Based on the literature reviewed the significant contribution of this paper is evident specifically in the entrepreneurial and leadership research in determining how firm performance can be improved.

2.8 Conclusion

The literature review presented multiple papers that considered the contingent effect of certain constructs on the EO-performance relationship. The chapter presents definitions and discussions for the independent variable EO and its factors to be considered in this study these include innovativeness, proactiveness and risk-taking (Lumpkin & Dess,

1996). The dependent variable, firm performance, was introduced. TL was defined, and its effect on firm performance was examined by looking at studies that empirically examined this relationship.

It is evident from Table 2 that the body of literature looking at entrepreneurship is increasing, as the importance of this business sector is being realised. The primary focus of these studies was to identify factors that could lead to performance and sustainability. Performance is a self-reported construct that is relative, as owner-managers may not freely share complete information in this regard, as firm performance can be used to measure the manager's effectiveness in running the organisation, this was confirmed by research papers presented in this chapter. This table clearly illustrate the gap that exists in studying and understanding how specifically TL can moderate the contingent EO-performance relationship. With this research, the author is attempting to bridge the aforesaid gap in the literature.

Chapter 3 will introduce the hypotheses setup through the literature review and research questions stated in Chapter 1. Firstly, the relationship between EO and firm performance will be established. Secondly TL is introduced as a moderator to establish the effects on the established EO-performance relationship.

CHAPTER 3

RESEARCH HYPOTHESES

3.1 Introduction

The significant relationship between EO and firm performance have been confirmed in various research papers (Rauch et al., 2009; Engelen et al., 2013; Jiang, Liu, Fey, & Jiang, 2018). This research seeks to confirm this relationship by focusing on the innovativeness, proactiveness and risk-taking dimensions of EO. TL has also been proven to positively affect the performance of a firm. This study will expand on the work done by Engelen et al. (2013) by introducing TL as a moderating construct in the EO and firm performance relationship. Through the literature, it is seen that EO-performance relationship has been established however, research on the moderating effect of TL has not enjoyed the same level of attention (Lumpkin & Dess, 1996; Rauch et al., 2009).

3.2 Hypotheses

Based on the literature and constructs associated with EO, organisational performance and transformational leadership, the study aims to test the following hypotheses:

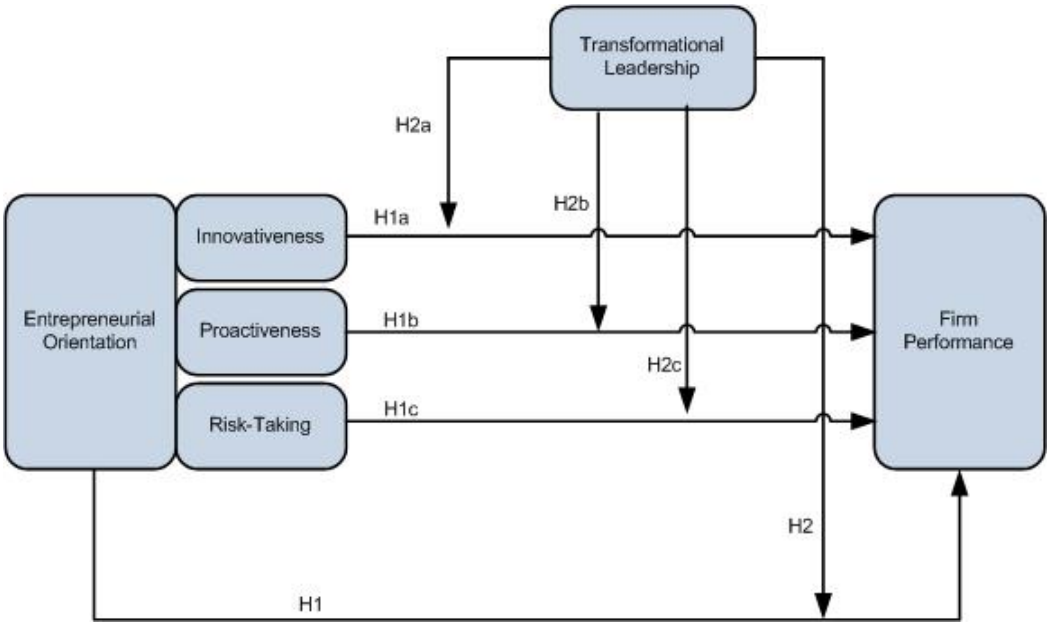


Figure 2. Proposed research framework for this study.

Hypothesis 1

H_{10}: There is no relationship between entrepreneurial orientation and firm performance.

H_{11}: There is a relationship between entrepreneurial orientation and firm performance

Hypothesis 1a

H_{1a0}: There is no relationship between innovativeness and firm performance.

H_{1a1}: There is a relationship between innovativeness and firm performance

Hypothesis 1b

H_{1b0}: There is no relationship between proactiveness and firm performance.

H_{1b1}: There is a relationship between proactiveness and firm performance

Hypothesis 1c

H_{1c0}: There is no relationship between risk-taking and firm performance.

H_{1c1}: There is a relationship between risk-taking and firm performance

Hypothesis 2:

H_{20}: Transformational leadership has no moderating effect on the relationship between entrepreneurial orientation and firm performance.

H_{21}: Transformational leadership has a moderating effect on the relationship between entrepreneurial orientation and firm performance.

Hypothesis 2a

H_{2a0}: Transformational leadership has no moderating effect on the relationship between innovativeness and firm performance (non-financial and financial)

H_{2a1}: Transformational leadership has a moderating effect on the relationship between innovativeness and firm performance (non-financial and financial)

Hypothesis 2b

H_{2b0}: Transformational leadership has no moderating effect on the relationship between proactiveness and firm performance (non-financial and financial)

H_{2b1}: Transformational leadership has a moderating effect on the relationship between proactiveness and firm performance (non-financial and financial)

Hypothesis 2c

H_{2c0}: Transformational leadership has no moderating effect on the relationship between risk-taking and firm performance (non-financial and financial)

H_{2c1}: Transformational leadership has a moderating effect on the relationship between risk-taking and firm performance (non-financial and financial)

CHAPTER 4

RESEARCH METHODOLOGY

4.1 Introduction

Chapter 3 introduced the research hypotheses for this explanatory study. The methodology that was used to accept or reject the research hypothesis is presented in this chapter. The selected methodology was based on the presented hypotheses, the population and the literature review in this study. Chapter 4 expanded on the research design, the selected method of analysis and the limitation of the research study.

4.2 Research Philosophy

According to Saunders, Lewis and Thornhill (2009) research philosophy is the acquired and type of knowledge related to the research topic. The assumptions contained in the research philosophy was supported by the research methodology used in this research. Defending one's philosophical choices against alternatives is more important than arguing the philosophical stance of the research (Saunders et al., 2009).

This study used a positivist approach. As stated in Saunders and Lewis (2012), the primary concern with a positivism approach would be to study qualitative and quantitative variables in controlled conditions and describe the observed results of the variables subjected to specific treatment. The law of cause and effect is at the root of a positivism study (Saunders & Lewis, 2012). Studies conducted in the field of SME performance were predominantly quantitative with aspects of realism that are internal factors affecting SME performance (Blackburn et. al., 2013; Sibiya, 2016).

4.3 Research Approach

Deduction is an enquiry that is guided by theory (Patrick & Steve, 2005). Patrick and Steve (2005) defined theory as "… speculative answers to perceived problems and are tested by observations and experiment." (p.19). A deductive approach starts with a

theory and a hypothesis that are tested, and based on the results obtained, the initial theory will be accepted or rejected (Saunders et al., 2009).

An extensive literature review was used to posit the research hypotheses. Research by Lumpkin and Dess (1996), postulated the contingent relation between EO and firm performance and suggested further research in this field. Table 2 in Chapter 2 of this research showed the extensive research done to identify moderating variables, internal and external to the organisation that can strengthen or improve the EO-performance relationship, however the focus on firm leadership is very limited. This research will be using a deductive approach to review theories presented in Chapter 2 of this document.

4.4 Research Strategy

The research strategy was essentially determined by the research questions. Saunders et al. (2009) defined explanatory research as investigating the causal relationship between an EO, and firm performance. The introduction of a moderating variable, TL, enabled the researcher to study how the strength of the relationship could be affected.

The hypotheses were setup to examine the main research questions for this study. Firstly, the researcher examined the quantitative relationship between the independent variables the EO and the factors of EO namely innovativeness, risk-taking and proactiveness and the dependent variable, firm performance. Secondly the researcher examined if the owner-manager's TL style can moderate the EO-performance.

4.5 Population

The population of this research are SMEs across varying sectors and industries in the South African market. According to SEDA (2017), there were more than 600 000 registered SMEs at the end of the third quarter of 2017, from varying sectors in SA.

The South African Chamber of Commerce and Industry (SACCI), the largest business organisation in the country, and it has almost fifty constituent Chambers, aid businesses to survive in these difficult economic times. The chamber's programs address the social, economic and political issues that impact businesses and their prosperity in one way or another. The chamber also acts as a voice for the businesses they represent. SACCI has a total membership of about 20 000 businesses (SACCI, n.d.)

The Roodepoort Chamber of Commerce and Industry (ROCCI) a member of the SACCI, is an independent apolitical association that creates an environment where businesses can interact and network. ROCCI was established in 1983 and serves the Roodepoort and surrounding suburbs. ROCCI has more than 350 members from 35 different sectors of industry, ranging from mining to agriculture (ROCCI, n.d.). ROCCI was approached to assist with the distribution of the survey link to their database of SME contacts.

Due to the slow response from the ROCCI members, a second database of 2 200 South African SMEs were acquired from an organisation that holds contact details of SMEs from different sectors and regions in South Africa. The company that provided the contact details, has the permission of all the listed organisations in the database to use their contact details in market research.

4.6 Unit of analysis

The samples of member contained in the universe is a representation of the unit of analysis (Patrick & Steve, 2005). The unit of analysis for this research are SMEs in South Africa. The online survey was directed at senior manager and/or directors of the firms, the individuals answering the survey should have access to information required in the survey (Arham, 2014). The researcher selected senior managers or directors since, EO is a firm-level strategy that would be developed by the senior management as the firm's strategic direction (Ireland, Hitt, & Carey, 2003). Responses from senior management was aggregated to perform statistical analysis representing an organisational level response. All respondents were assured of confidentiality and information will be kept confidential.

4.7 Sampling method and size

Collecting data from a sample of the population frame would generate findings that would represent of the entire population. Saunders and Lewis (2012) stated that there is no significant benefit in gathering data from the entire population when compared to a sample representing the population. Large collections of data may give a better result however, it will take a long time to collect and clean the data. The sampling frame will be SMEs in the database of ROCCI that are approximately 350 SMEs and the additional 2 200 contacts acquired from the second database. The sample frame contained 2 550 SMEs from different sectors and from different regions in South Africa.

The selection of SMEs was done as a non-probability purposive sampling method from the database. The non-probability sampling technique was selected as the researcher did not have a list representing the complete population. Therefore the chance of selecting a specific SME could not be predetermined (Saunders & Lewis, 2012). According to Saunders and Lewis (2012), purposive sampling is used by a researcher that needs to understand what is happening, so a logical generalisation can be made. Feedback obtained from the respondents provided diverse answers based on the different industries they represented. SMEs in South Africa need to conform to specific criteria, refer Table 1, to be classified as an SME, and these firms would likely be homogenous in nature resulting in similar results if probability sampling was used.

A total of 164 responses were received that is 6.4% response rate. This number was reduced to 159, by removing firms that did not fit the description of SME in terms of number of employees and the respondent's level in the organisation. Possible factors that may have resulted in the low response could be time and resource constraints, some of the companies in the database may not be operating any longer. Researchers studying SMEs have highlighted the problem of a low response rate in their studies (Shirokova et al., 2016; Vora et al., 2012; Yang, 2008). Kothari, Kumar and Uusitalo (2014) cautioned on low response rates when using survey questionnaires. Tabachnick and Fidell (2014) have however indicated a suitable sample size for multiple regression should satisfy the formula:

$$N > 50 + 8 * m$$

where N is the number of samples and m is the number of independent variables in the study. The number of responses in this sample achieved a larger number than proposed 66 samples from the calculation. Pallant (2010) advised that for stepwise regression the sample should be a ratio of 40 to every independent variable. This study achieved a ratio of 2:1 that equated to 79 cases for each independent variable. The sample size was adequate to achieve representative results during analysis of the collected data.

4.8 Measurement instrument

Data were collected through a self-administering web-based survey Appendix 1. The questionnaire was designed in google forms allowing for simple distribution and simple download and manipulation of data within Microsoft Excel and analysis using IBM SPSS.

The four-part survey collected biographic, EO, TL characteristics and firm performance data.

4.8.1 Transformational Leadership – MLQ form 6S

A review of the literature into leadership confirmed the decision to use a Multifactor Leadership Questionnaire (MLQ form 6S) adapted from Vinger & Cilliers (2006), to study manager's leadership style. The MLQ form 6S scales comprises of three subscales used to measure transformational, transactional and laissez-faire leadership styles. The MLQ is the most frequently used instrument in leadership studies (Vinger & Cilliers, 2006). This scale developed by Avolio and Bass, was used to evaluate TL styles and its factors namely idealised influence, individualised consideration, intellectual stimulation and inspirational motivation.

Muenjohn and Armstrong (2008) evaluated the MLQ instrument and evaluated the instrument's internal reliability, Cronbach's alpha = 0.87. The measurement instrument was anchored in a five-point Likert scale that ranged from 1 = Not at all to 5 = Frequently.

4.8.2 Entrepreneurial Orientation

The second section of the survey focussed on EO, using the Entrepreneurial Orientation Questionnaire (EOQ). The EOQ scale was developed by Hughes and Morgan (2007) and was adapted to measure the three EO factors and includes, innovativeness, proactiveness and risk-taking to be considered in this research (Shirokova et al., 2016). The Hughes and Morgan scale used in this research does not consider EO as a consolidated or unidimensional empirical construct, for this reason the researcher could remove competitive aggressiveness and autonomy from the scale. This scale was developed based on the findings by Lumpkin and Dess (1996) that the multidimensionality of EO should be considered when measuring this construct. Hughes and Morgan (2007) confirmed the reliability of the scales by the calculated Cronbach's alpha for all the variables, the results obtained were: innovativeness = 0.81; risk-taking = 0.77; proactiveness = 0.75. These results made this instrument suitable for use in this research. The independence of the dimensions enabled the researcher to examine the individual effects of the integration with transformational leadership.

4.8.3 Firm Performance

In keeping with previous research, this study considered firm growth and profitability as proxies for business performance (Aziz et al., 2013; Alrowwad et al., 2016; Arshad et al., 2014). The researcher anticipated that access to financial data may be difficult to acquire, as small business owners would be reluctant to share this information. Growth was considered representative of firm performance, if the firm had not made a strategic decision to contain growth as a means of sustainability in tough economic conditions. Firm performance was therefore measured as financial and non-financial constructs. As a multidimensional construct, performance of a firm is very difficult to measure , especially as owner-managers feel negative performance may reflect on his or her leadership quality and ability to sustain a business, making this a subjective measure (Aziz, Abdullah & Tajudin 2013; Van Doorn et al., 2013; Vora et al., 2012; Yang, 2008). As this construct was self-reported there may have been a measure of bias in their responses.

Performance is a multi-dimensional construct using either financial or non-financial indication. The most common measure of performance is financial, this however is difficult to obtain in small unlisted entities. Performance measures for SMEs may be considered more intangible constructs as small firms may consider sustainability as performance measure. This research will consider the following performance measures:

1. Number of Employees
2. Market Share
3. Firm's growth
4. Market share increase
5. Returns on Investment
6. Return on Sales

All the measures required owner-managers to compare these factors to known competitors in their industry.

Firm performance data formed the final section of the survey. The scale that was employed considered the multi-dimensionality of organisation performance (Wiklund & Shepherd, 2005). The scale used in this research was anchored in a five-point Likert scale ranging from 1- "much better than competitors" to 5 -"much worse than competitors".

4.9 Data Collection

4.9.1 Pilot Study

The survey was pre-tested with fifteen SMEs that had less than 200 employees. These firms' owner-managers agreed to complete the survey and were chosen based on the convenience and speed with which the researcher could get feedback. Eight responses were received, with no feedback or questions on the questionnaire, meaning the questionnaire was clear and easy to understand (Pallant, 2010). As no changes were made to the questionnaire the eight respondent's replies were included in the research final count.

4.9.2 Main Study

Data for this mono-method research was collect using a self-administering internet-based survey. The survey was directed at the SME owner-managers who had insight into the firm's information and would be able to complete the survey. Several researchers that studied EO-firm performance relationship used questionnaire surveys (Katou, 2015; Semrau et al., 2016; Yang, 2008). Surveys have been found to be far reaching and the use of standardised questionnaires assures consistency of data, granted the questions are understood in the same way by all the respondents. This economical method of collecting quantitative data allowed for easy comparison and analysis using inferential and descriptive statistics (Saunders et al., 2009). Surveys are usually associated with a deductive approach to obtain answers to who, what, where, how much and how (Saunders et al., 2009).

Data collection was done using an open-ended self-administered questionnaire completed by owner-managers (entrepreneurs) of the various firms. This study was a cross-sectional study of SMEs in South Africa across different sectors. Saunders and Lewis (2012) confirmed that a cross-sectional study will normally employ a survey strategy and produce quantitative data. The survey was distributed during the last week of July 2018. During the first two weeks the survey collected data from 10 respondents from the ROCCI database. The second survey was distributed at during the third week of August 2018 and received 65 responses, this seemed very positive. The response rate dropped dramatically and only added an additional 53 respondents over the next two weeks. A follow-up email was sent out in the middle of September 2018, and the survey was closed at the end of September 2018 after receiving 164. The researcher

opted to use an internet-based survey as it reached a wider population of respondents in a shorter period.

4.10 Data Analysis

A total of 164 responses were received through the survey. The sample responses were extracted from Google forms into Microsoft Excel. Five responses were disregarded for non-conformance to the definition of SME and survey filled out by employees not in a senior role in the organisation. After cleaning the data and removing responses that did not comply to the criteria the final usable sample equated to 159 responses response.

The coded continuous data was exported to IBM SPSS version 25 for statistical analysis. The data was firstly checked for missing data and outliers, before any analysis were performed.

4.10.1 Dealing with missing values and outliers

The analysis for missing values found no significant missing data, with the highest value achieved being 0.6%, this is within the proposed range of 5% (Schafer, 1999).. Following the missing values analysis, the data was analysed for extreme outliers. One response (response 56) was found to have multiple extreme outliers (3 times interquartile range) and was subsequently removed, resulting in the total responses changing from 159 to 158. See Appendix 3 for the output of analysis.

4.10.2 Validity and Reliability

Reliability is the uniformity and accuracy of a selected scale yielding consistent results by establishing the degree of consistency between variables (Zikmund, 2002). It can therefore be said "…reliability indicates the accuracy, stability and predictability of a research instrument." (Kothari et al., 2014, p.345). Reliability ensures minimal variability between responses, in order to ensure repeatability (Hair, Black, Babin, & Anderson, 2010). The internal consistency of the scales was assessed by calculating the Cronbach's Alpha coefficient, thus confirming the items that makeup the scales are measuring common attributes and are closely related. Cronbach's alpha as a reliability coefficient should not be less than 0.7 (Hair et al., 2010). The constructs in this study were measured by Likert scales. TL was assessed by seven-point Likert-scale whilst EO and firm performance were grounded in five-point Likert-scale respectively.

Validity is the process of ensuring one is measuring what one initially sets out to measure and confirming the measures are as accurate as and reflective as possible (Hair et al., 2010; Alversia, 2011). Internal construct consistency is reflected in high construct validity signifying internal consistency. Pallant (2010) described construct validity as testing the scale with relation to the hypotheses and the underlying nature of the measured constructs. Two validity measures are considered convergent validity and discriminant validity.

The degree of convergent validity can be analysed through factor analysis (Hair et al., 2010). Convergent validity refer to "…indicators of a specific construct that should converge or share high proportion of variance" (Hair et al., 2010, p. 709).

Discriminant validity is proven when constructs have low correlation with measures of different constructs (Zikmund, 2002). The uniqueness of a construct is evidenced by high discriminant validity by means of a correlation analysis.

Reliability, convergent and discriminant validity for each of the measured constructs are discussed in the next section of this chapter.

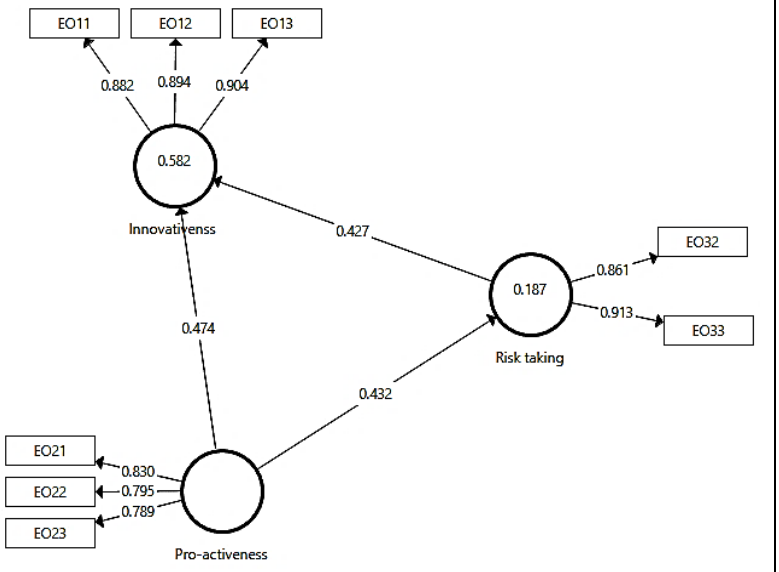
4.11 Data Preparation

4.11.1 Entrepreneurial Orientation – Model fit, Validity and Reliability

As the instrument for entrepreneurial orientation was existing from Hughes and Morgan (2007) a confirmatory factor analysis (CFA) was analysed for validity and the reliability of the instrument. Smart-PLS 3 was used to conduct SEM-PLS, partial least square, as the total sample was less than the threshold limit of 200 to conduct Structural Equation Model Covariance Based (SEM-CB) (Ringle, Wende, & Becker, 2015).

Henseler, Hubona and Ray (2016) has indicated in their study that SRMR as a single indicator of model fit is acceptable for partial least squares (PLS) modelling.

Figure 3 presents a hypothesised model of the EO. The results obtained showed good model fit following the removal of variable 'EO31'-"The term risk-taker is considered a positive attribute for people in our business", with the standardised root mean square residual (SRMR) of 0.08 (≤ 0.08) (Hu and Bentler, (1999) and Normed fit index (NFI) of 0.757 (>0.7). This confirms that the three constructs, innovativeness, pro-activeness and risk taking can effectively be used to measure entrepreneurial orientation.



SRMR – 0.08

ULS – 0.230

G1 – 0.177

G2 – 0.150

Chi – Square – 145.678

NFI – 0.757

Figure 3. Hypothesised model for entrepreneurial orientation and model fit results.

The convergent and discriminant validity and reliability of the instrument were assessed, the results are presented in Table 3 and Table 4, respectively.

The squared sum of factor loading is used to calculated the construct reliability that is applicable to SEM model (Hair et al., 2010). The results presented in Table 3 for the Cronbach's alpha, composite reliability and Rho_A are all greater than 0.7 indicating good construct reliability according to Hair et al. (2010). The high reliability is an indication of internal consistency.

The results show that there was a good convergent validity of the EO dimensions namely innovativeness, pro-activeness and risk-taking with all factors having an average variance extracted (AVE) of more than 0.5, being 0.798, 0.648 and 0.787, respectively (Hair et al., 2010). Fornell-Larcker criterion was used to assess the discriminant validity, the results are shown in Table 4. The table shows the latent variable loading on itself is the highest, furthermore the table depicts all cross-loading factors are greater than 0.7 indicating good discriminant validity.

Table 3*. Convergent Validity and Reliability of Entrepreneurial Orientation Scale.*

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Innovativeness	0,873	0,875	0,922	0,798
Pro-activeness	0,731	0,741	0,847	0,648
Risk taking	0,733	0,758	0,881	0,787

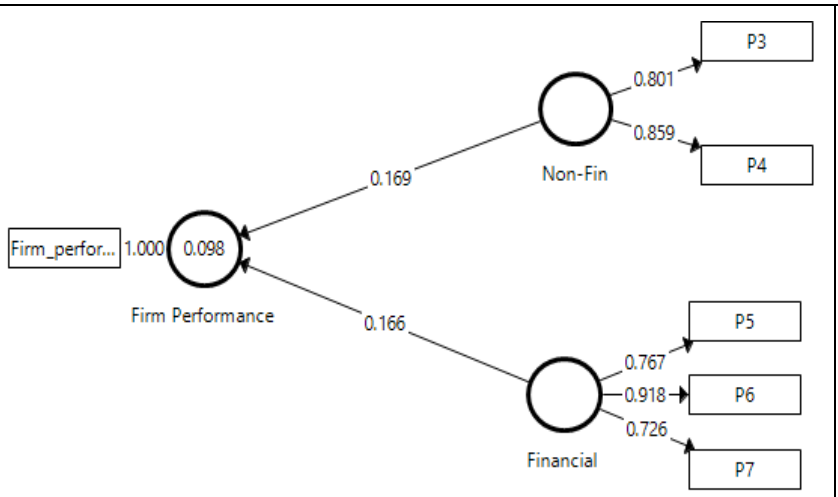
Table 4. *Discriminant Validity of EO with Fornell-Larcker Criterion and Cross Loading*

Fornell-Larcker Criterion	Innovativeness	Pro-activeness	Risk taking
Innovativeness	0,893		
Pro-activeness	0,658	0,805	
Risk taking	0,632	0,432	0,887
Cross Loadings			
	Innovativeness	Pro-activeness	Risk taking
EO11	**0,882**	0,613	0,511
EO12	**0,894**	0,599	0,530
EO13	**0,904**	0,555	0,648
EO21	0,614	**0,830**	0,383
EO22	0,492	**0,795**	0,314
EO23	0,467	**0,789**	0,340
EO32	0,485	0,351	**0,861**
EO33	0,624	0,412	**0,913**

4.11.2 Firm Performance – Model fit, Validity and Reliability

An existing instrument by Wiklund and Shepherd (2005) was used to assess the firm performance. The validity and reliability of the constructs were confirmed through a confirmatory factor analysis (CFA) as the scale used to measure the firm performance was existing. Figure 4 represents a hypothesised model of the firm performance. The results show a good model fit following the removal of variable P1 – “Growth in number of employees” and P2 – “Growth in market share”.

The standardised root mean square residual (SRMR) was found to be 0.045 (≤ 0.08) (Hu and Bentler, 1999) and the Normed fit index (NFI) was 0.907 (>0.7). According to Henseler, Hubona and Ray (2016) the constructs have a good model fit and the two factors, non-financial and financial can effectively measure firm performance.



SRMR – 0.053

ULS – 0.059

G1 – 0.063

G2 – 0.055

Chi-Square – 46.399

NFI – 0.888

F*igure 4. Hypothesised model for firm performance and model fit results.*

The convergent validity, discriminant validity and reliability were evaluated for the abovementioned constructs. The results presented in Table 5 for the Cronbach's alpha, composite reliability and Rho_A are all greater than 0.7 indicating good construct reliability according to Hair et al. (2010).

The results show there was good convergent validity for non-financial and financial constructs with average variance extracted (AVE) of 0.652 and 0.690, respectively, refer Table 5. The Fornell-Larcker criterion and cross loading, Table 6, presented good results for the discriminant validity of the two performance dimensions.

Table 5. *Convergent Validity and Reliability of Firm Performance*

	Cronbach's Alpha	Rho_A	Composite Reliability	Average Variance Extracted (AVE)
Firm Performance	1.000	1.000	1.000	1.000
Financial	0.848	0.860	0.848	0.652
Non-financial	0.815	0.818	0.816	0.690

Table 6. *Discriminant Validity of Firm Performance with Fornell-Larcker Criterion and Cross Loading*

	Financial	Firm Performance	Non-financial
Financial	0.808		
Firm Performance	0.292	1.000	
Non-financial	0.746	0.293	0.831
	Financial	**Firm Performance**	**Non-financial**
Firm Performance	0.292	1.000	0.293
P3	0.654	0.243	**0.801**
P4	0.588	0.251	**0.859**
P5	**0.767**	0.224	0.626
P6	**0.918**	0.268	0.669
P7	**0.726**	0.212	0.504

4.11.3 Transformational Leadership

The focus of the study was to determine if TL would have a moderating effect on the EO-performance relationship. For this reason only, reliability determination of the overall construct was conducted and is presented in Table 7. The Cronbach's alpha was initially calculated as 0.66 for all 12 items of transformational leadership, this value is lower than the suggested 0.7 for good reliability (George & Mallery, 2010). High reliability was sought, and thus, TL7 – "I am content to let others continue working in the same way as always" was removed, which improved the Cronbach Alpha to 0.703. Removing TL5 – "I tell others what to do if they want to be rewarded for their work", further improved the internal reliability to 0.729. This was taken as the final reliability as it was higher than 0.7 given as a guideline by George and Mallery (2010). The removal of the two variables, P1 – "Number of Employees" and P2 – "Firm market share", yielded a significant improvement in the reliability of the construct.

Table 7. *Reliability of Transformational Leadership*

Reliability Statistics		Reliability Statistics after Removal of TL7 and TL5	
Cronbach's Alpha	No of items	Cronbach's Alpha	No of items
0.661	12	0.729	10

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TL1	43.42	16.220	0.361	0.631
TL2	43.62	16.632	0.225	0.656
TL3	43.28	16.903	0.311	0.640
TL4	43.19	16.435	0.402	0.627
TL5	44.05	16.278	0.174	0.676
TL6	43.15	16.558	0.350	0.634
TL7	45.24	18.464	-0.029	0.703
TL8	43.34	16.277	0.486	0.618
TL9	43.49	16.519	0.309	0.640
TL10	43.34	16.634	0.340	0.635
TL11	43.46	15.613	0.489	0.610
TL12	43.27	15.903	0.459	0.616

4.12 Descriptive Statistics

The demographic information captured by the questionnaire enabled the analysis of descriptive statistics. These statistics provided insight into the data and provided information concerning the behaviour of the variables in this study, through simple summaries (Wegner, 2016). Descriptive statistics for the measured constructs provide an understanding of the variability of the measured scores (Zikmund, 2002). The descriptive data included central tendency which included, mean, mode and median; variability that included variance, standard deviations and frequency distributions for the measured constructs. The descriptive statistics are presented in Chapter 5 of this study.

4.12.1 Test for Normality: Skewness and Kurtosis

Normal distribution of data is a prerequisite for Likert scale data to be seen as interval and not ordinal (George & Mallery, 2010). As skewness measure can be used to confirm data *normality. Kurtosis* is used to measure peakedness or flatness of a normal distribution (Hair et al., 2010). According to George and Mallery (2010) the acceptable value for skewness and kurtosis should be between -2 and +2.

4.13 Inferential Statistics

Regression analysis was used to investigate the linear relationships between the three factors, innovation, proactiveness and risk-taking of EO and firm performance. Regression analysis is a statistical analysis that quantifies the association between dependent and independent variables, with a measure of the strength of that relationship (Wegner, 2016). The linear relation between the independent and dependent variables is predicted by performing a regression (Wegner, 2016). Regression is a parametric inferential statistic, utilised when both the dependent and independent variables are continuous, with a normal distribution (Alversia, 2011). This study used multiple regression to understand the variability of the dependent construct influenced by an independent and a moderator variable

4.13.1. Pearson's r Correlation

Correlation analysis determines to what extent a change in one variable will influence the change in second (Pallant, 2010) The correlation strength and direction is described in relationship between two variables. The Pearson's correlation was used to determine the existence of relationships between, firstly between EO and firm performance and secondly between the stated three dimensions of EO and firm performance respectively. The factors of EO are innovativeness, proactiveness, risk-taking and the two constructs of firm performance is financial and non-financial measures of firm performance. The value of the correlation value can range between 0 and 1 and can be positive or negative. The results of the analysis will be presented in the next chapter.

4.13.2. Simple linear regression

In simple linear regression, there is one dependent variable, Y, and one independent variable, X (Wegner, 2016). The relationship between the variables can be expressed by the following equation:

$$Y = a + bX$$

where: a indicate the intercept where X = 0;

b is the slope of the least squares line, indicating the value of Y with a change in X.

4.13.3. Moderation Analysis

The moderating effect of transformational leadership was examined through applying multiple linear regression analysis. This statistical analysis was used in several studies examined in Chapter 2 of this research document use similar multivariate analysis. The following studies used the same statistical approach to inspect the effect of a moderating variable on an independent variable and the dependent variable: (Engelen et al., 2013, 2014; Ensley et al., 2006; Yang, 2008). The moderator variable, M, is not a predictor, but it influences the strength, sign and size of the relationship (Hayes, 2014). A simple moderation model is depicted in the Figure 5.

The moderator analysis was performed using an add-in software in SPSS named PROCESS. The PROCESS algorithm was developed by Hayes and conducts the regression and inferences in SPSS. The moderator analysis for this study was conducted using PROCESS V3.

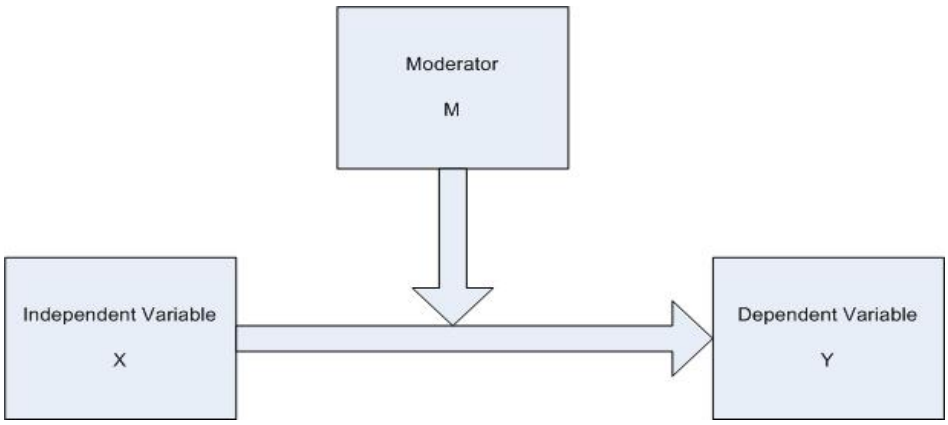


Figure 5. Simple moderator conceptual model adapted from Hayes (2014).

According to Hayes (2014), the moderator analysis tests the interaction between M and X, in a model of Y. The relationship between the X and Y is linear including the relationship between the M and X, with Y being the continuous variables. A simple moderator model can be expressed mathematically as:

$$Y = i_1 + b_1X + b_2M + b_3XM + e_y$$

The conceptual moderator model, Figure 5, was used to setup the hypotheses, presented in Chapter 3 of this research document. The procedure and results are discussed in Chapters 5, following the presentation of the descriptive statistics, and the testing of the assumptions made in this research.

The regression terms for this research study can be presented as follows:

Y – Firm Performance

M – Transformational Leadership

X – Innovativeness, Proactiveness, Risk-Taking (Entrepreneurial Orientation)

XM – Independent Variable-moderator interaction term:

a. Innovativeness*TL
b. Proactiveness*TL
c. Risk-taking*TL
d. EO*TL

4.14 Ethical Consideration

Permission was received from the database holders that the research could be distributed. The database holders assured themselves that the respondents have given the necessary permission to participate in marketing or other research.

The survey included a participation consent section that required the participant to agree before moving on to complete the survey. The researcher's contact details were provided in case the participant had any concerns. The participants' confidentiality was guaranteed, and they were assured that no names would be collected. The respondent was made aware that the survey was voluntary and could withdraw from the process at any time during the survey.

4.15 Limitations of the study

The limitation of the research, like most quantitative research, relates to data collection and analysis. Some of the limitations that was observed included inadequate samples size, errors in measurement of variables and subjectivity on the part of the respondent (Zikmund, 2002). This section will highlight the limitation that may be present in this quantitative research study.

4.15.1 Sample Size

The sample contained SMEs from different sectors of industry from different regions and provinces in South Africa. The spread of responses was biased to the services and catering sector. The different regions and provinces may have influenced on the response of the respondent. However, research by Engelen et al. (2013), has shown that the geographic location of a firm does not affect EO-performance relationship. The relatively small sample size of respondents from the different industries is however representative of the SMEs in SA.

4.15.2 Owner-Manager Response

The survey measured the owner-manager's transformational leadership style. As these questions are self-reporting there may be a measure of bias in their answering of the leadership and performance data questions.

4.15.3 Performance of the firm

Firm performance may give a better reflection over a period of time. Longitudinal study is more suited to performance measuring for a firm. The cross-sectional study does not account for changes over time or the firm's strategic intent over the period. This is very relevant when looking at SMEs that are susceptible to environmental changes due to limited resources. Some of the answers in the survey may be determined by the current economic conditions, instead of the actual long-term performance parameters.

4.15.4 Financial Data

Financial data was not explicitly collected as SME owner were reluctant to share this information. Thus, the only criteria that could be used to classify SME was by the number of employees. No distinction was made between micro, small and medium firms. However, all firms considered in this study were SME and any conclusion from this study would be representative of SMEs in a South African context.

4.16 Conclusion

This chapter described the research methodology used to validate the set hypotheses developed in Chapter 3. The methodology used was discussed in detail and the motivations for specific test have been supplied. The survey design and data collection

were described, and the origin of all scales used in this research have been explained. The reliability and validity of all the scales were confirmed through calculation of the Cronbach's alpha, AVE, Fornell and Larcker criteria and factor cross-loading.

The chapter is concluded with a detailed overview of the selected statistical test that was used in the research. The statistical moderation test was conducted with an SPSS plug-in, PROCESS V3, an algorithm developed by Hayes (2014). Finally, the methodology and study limitations were noted and discussed. The analysis and results of the collected data will be presented in the chapter that follows.

CHAPTER 5

RESULTS

5.1 Introduction

Chapter 4 presented the methodology for the study which outlined the approached that was taken to investigate the hypotheses presented in Chapter 3. This cross-sectional explanatory study investigated the relationship between EO and firm performance and the moderating effect of TL on the said relationship.

This chapter will present the results obtained from the data collected and the analysis as described in the Chapter 4. The chapter will start with the presentation of the descriptive statistics of the biographic data followed by the regression analysis to test the presented hypotheses.

5.2 Biographic Data

The survey collected data for four variables to determine the biographic profile of the respondents and the organisations. Table 8 presents the data for the respondent's gender, the age of the firm, the number of employees in the firm and the industry in which the firm operates.

Most of the respondents were male. 75.9% (n = 120) of the 158 total respondents.

With regards to firm's age, the data shows the majority of the firms surveyed, n=103, surveyed were in existence between 11 and 20 years, the number equated to 65.2% of the total respondents (n = 158). Firms that have been in existence for more than 20 years accounted for 24.7% (n = 39) and the remaining firms with less than ten years of operation accounted for 5.1%.

Of the 158 respondents, 64.6% (n=102) of firms employed less than 50 employees, firms with more than 100 employees amounted to 19.6% (n = 31) and firms employing between 50 and 100 employees amounted to 15.8% (n = 25) of the 158 respondents. These employees were from different industries, with the highest representation from the

services industry with 39.2% (n = 62) followed by engineering with 24.1% (n = 38) then manufacturing with 15.8% (n=25).

Table 8*. Biographic Information of the Respondents.*

Biographic variables		Frequency (n)	Percent (%)
Gender	Male	120	75.9
	Female	38	24.1
Age	Less than 5 years	8	5,1
	Between 5 and 10 years	8	5,1
	Between 11 and 20 years	103	65,2
	More than 20 years	39	24,7
	Total	158	100,0
No of employees in the firm	Less Than 50	102	64,6
	Between 50 and 100	25	15,8
	More than 100	31	19,6
	Total	158	100,0
Industry	Manufacturing	25	15,8
	Services	62	39,2
	Logistics and Transport	4	2,5
	Financial Services	8	5,1
	Engineering	38	24,1
	Construction	10	6,3
	Catering	6	3,8
	Retail	5	3,2
	Total	158	100,0

5.3 Descriptive Analysis

5.3.1 Variables of Entrepreneurial Orientation

Entrepreneurial orientation consisted of three factors that in turn was described by three variable each. The descriptive statistics of these variables are presented in Table 9. The entrepreneurial orientation presents a majority median of 6.00. The mean variables did not show much differences with means ranging from 5.17 to 5.93. The highest mean variable was found to be for EO13 – “Our business seeks out new ways to do things” (M = 5.93, SD = 0.982) followed by EO11 – “We actively introduce improvements and innovations in our business”, with (M = 5.92, SD = 0.997). The third highest measured

mean was EO21 - “We always try to take the initiative in every situation (e.g., against competitors, in projects when working with others)” at (M= 5.74, SD = 1.032). The lowest variable mean was (M = 5.17, SD = 1.415) for EO31 - “The term ‘risk taker’ is considered a positive attribute for people in our business” followed by (M = 5.38, SD = 1.141) for EO23 - “We initiate actions to which other organizations respond”. All variables except for EO22, EO23 and EO31 agreed with median 6.

a. Data Normality: Skewness and Kurtosis

All the variables of entrepreneurial orientation were within the limits of ±2 except the kurtosis for variable EO11 that was slightly outside the range at 2.059. This value was considered very small and no action was taken with EO11. Skewness ranged between -1.100 and -0.349 with a standard error of 0.192. Kurtosis ranged between -0.381 to 2.059 with a standard error of 0.383.

Table 9*. Descriptive Statistical Analysis of the EO Variables.*

	Mean	Median	Std. Deviation	Skewness	Kurtosis
EO11	5.89	6.00	1.067	-1.100	2.059
EO12	5.71	6.00	1.057	-0.796	0.676
EO13	5.93	6.00	0.982	-0.877	0.545
EO21	5.74	6.00	1.032	-0.652	-0.029
EO22	5.45	5.00	1.042	-0.349	-0.298
EO23	5.38	5.00	1.141	-0.538	-0.001
EO31	5.17	5.00	1.415	-0.848	0.865
EO32	5.55	6.00	1.080	-0.593	0.010
EO33	5.59	6.00	1.086	-0.388	-0.381

5.3.2. Variables of Transformational Leadership

The descriptive statistics for TL are presented in Table 10 with missing values deleted on a case-wise basis. The mean values ranged from 2.28 to 4.39 with the highest median of 5.00, and the lowest median of 2.00. A median of 4 was the most common between the variables considered. The highest calculated mean was for variable TL6 - “I am satisfied when others meet agreed-upon standard” (M = 4.39, SD = 0.711) with a median of 5, followed by TL4 - “I help others develop themselves” with the (M = 4.35, SD = 0.675). The variable that had the lowest calculated mean value was (M = 2.28, SD =

0.929) with a median of 2 for TL7 - “I am content to let others continue working in the same way as always”. TL5 - “I tell others what to do if they want to be rewarded for their work” achieved (M = 3.49, SD = 1.119). TL2 - “I express with a few simple words what we could and should do.” achieved had mean of (M = 3.92, SD = 0.900). All other variables presented with a median of 4.

Table 10*. Descriptive Statistical Analysis of the Variables of Transformational Leadership*

	Mean	Median	Std. Deviation	Skewness	Kurtosis
TL1	4.10	4.00	0.781	-0.748	0.870
TL2	3.92	4.00	0.900	-0.840	0.638
TL3	4.25	4.00	0.675	-0.476	-0.235
TL4	4.35	4.00	0.675	0.673	-0.089
TL5	3.49	4.00	1.119	-0.457	-0.468
TL6	4.39	5.00	0.711	-0.835	-0.160
TL7	2.28	2.00	0.929	0.462	0.064
TL8	4.19	4.00	0.618	-0.305	0.250
TL9	4.03	4.00	0.783	-0.777	1.067
TL10	4.19	4.00	0.704	-0.613	0.373
TL11	4.08	4.00	0.754	-0.495	-0.091
TL12	4.27	4.00	0.726	-0.766	0.321

The skewness and kurtosis proved to be in the specified range, ±2, signifying the normal distribution of the data (George & Mallery, 2010). The kurtosis ranged between -0.468 to 1.067 with a standard error of 0.383, and the range for skewness was -0.840 to -0.305 with a standard error of 0.192.

5.3.3. Firm Performance

A total of seven variables were utilised to understand the firm performance. The descriptive analysis for the firm performance variables is presented in Table 11. The mean values of the variables showed consistency, as the values ranged between 3.03 and 3.44. The medians for all values were located around 3.00 and 4.00 with a bias toward a median of 3.00. The highest mean variable was P2 - “Growth in Market Share” (M = 3.44, SD = 1.049). This was followed by (M = 3.43, SD = 1.065) for P4 - “Our market

share is increasing faster than those of our competitors." The lowest mean variable was for P5 - "We are satisfied with the returns on corporate investments." achieving (M = 3.03, SD = 1.070) followed by (M = 3.08, SD = 1.003) for P7 - "We are satisfied with our return on sales.". The analysis considered firm performance comprising of financial and non-financial indicators. The effects of the three dimensions of EO were considered for both financial and non-financial firm performance. EO in this study considered the firm performance construct as a construct that included both financial and non-financial variables.

Table 11*. Descriptive Statistics of Firm Performance Variables.*

	Mean	Median	Std. Deviation	Skewness	Kurtosis
P1	3.16	3.00	1.124	0.024	-0.736
P2	3.44	4.00	1.049	-0.484	-0.270
P3	3.22	3.00	1.123	-0.391	-0.543
P4	3.43	4.00	1.065	-0.399	-0.358
P5	3.03	3.00	1.070	-0.095	-0.518
P6	3.15	3.00	0.982	-0.065	-0.196
P7	3.08	3.00	1.003	-0.191	-0.518

5.3.4 Normality of residual error of the regression

Table 12*. Shapiro-Wilk Result Test for Normality*

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual (financial)	0.062	158	0.200*	0.987	158	0.148
Standardized Residual (non-financial)	0.049	158	0.200*	0.992	158	0.530
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

From the analysis presented in Table 11 it is clear from the data skewness and kurtosis of the data is normally distributed. The kurtosis values ranged between -0.196 and -0.736 with a standard error of 0.383, and the range for skewness was -0.484 to 0.024 with a

standard error of 0.192. Furthermore, the Shapiro-Wilk results show that the residual error of the regression for both financial and non-financial are normally distributed.

5.4 Inferential Statistics

5.4.1. Correlation between Entrepreneurial Orientation and Firm Performance

As presented in Chapter 3 we will first determine the relationship between EO and firm performance.

H_{10}: There is no relationship between entrepreneurial orientation and firm performance.

H_{11}: There is a relationship between entrepreneurial orientation and firm performance.

A Pearson's r correlation was conducted to test the relationship between EO and firm performance, the results are presented in Table 13. The results show that there is a significant and positive but weak relationship between EO and firm performance (R = 0.297, P < .01)

Table 13*. Pearson's Correlation Between EO and Firm Performance.*

		Entrepreneurial orientation	Firm Performance
Entrepreneurial orientation	Pearson Correlation	1	0.279**
	Sig. (2-tailed)		0.000
	N	158	158
Firm Performance	Pearson Correlation	0.279**	1
	Sig. (2-tailed)	0.000	
	N	158	158

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

With the relationship being significant, a linear regression analysis was performed to understand the amount of variance that will be explained by the predictor variable (EO) on dependent variable (firm performance). Table 14 presents the results of the linear regression analysis. The model summary shows an R-square of 0.078 and an adjusted R-square of 0.072. A Durbin Watson test for autocorrelation was 1.827 which is between

1.5 and 2 confirming good autocorrelation in the residuals from the statistical regression analysis (Hair et al., 2010).

Table 14*. Linear Regression Model of EO and Firm Performance.*

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.279[a]	0.078	0.072	0.82264	1.827

a. Predictors: (Constant), Entrepreneurial orientation

b. Dependent Variable: Firm Performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.894	1	8.894	13.143	.000[b]
	Residual	105.57	156	0.677		
	Total	114.464	157			

a. Dependent Variable: Firm Performance

b. Predictors: (Constant), Entrepreneurial orientation

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.425	0.491		2.9	0.004
	Entrepreneurial orientation	0.312	0.086	0.279	3.625	0.000

a. Dependent Variable: Firm Performance

The mean square of regression is 8.894 while the mean square for residual was 0.677, $p<0.01$. The relationship of these two variables is significant $F(1, 156) = 13.143$, $p < 0.05$, with the EO a significant predictor being ($\beta = 0.279$, $p < 0.05$) that only predicts 7.8% of the firm's performance, meaning 92.2% of the firm's performance is described by other factors in and around the organisation.

5.4.2. Entrepreneurial orientation sub-construct relationship with Firm Performance

H_{1a0}: There is no relationship between innovativeness and firm performance.

H_{1a1}: There is a relationship between innovativeness and firm performance

H_{1b0}: There is no relationship between proactiveness and firm performance.

H_{1b1}: There is a relationship between proactiveness and firm performance

H_{1c0}: There is no relationship between risk-taking and firm performance.

H_{1c1}: There is a relationship between risk-taking and firm performance

A Pearson's correlation analysis is presented in Table 15. The correlation test was conducted to investigate if the three dimensions of EO have a significant relationship with financial and non-financial firm performance. The relationship between the performance variables, financial and non-financial was found to be significant, positive and large ($R = 0.642$, $p<0.01$). Based on the guidelines by Pallant (2010) the relationship is large indicating a strong relation between the two factors.

Pro-activeness also shows a positive and significant relationship with the other four variables with the Pearson correlation ranging from ($R=0.277$ to $R=0.649$, $p<0.01$)

Innovativeness also shows a strong relationship to the other factors of EO proactiveness and risk-taking, ($R= 0.649$, $p<0.01$) and ($R=0.622$, $p<0.01$) respectively. The relationship with financial and non-financial factors were found to be weaker at 0.196 and 0.258 respectively, but still significant and positive.

Risk-taking showed a positive relation to the other EO factors, proactiveness ($R = 0.622$ $p<0.01$) and innovativeness ($R=0.42$, $p<0.01$), but showed a non-significant relationship with the non-financial and financial firm performance factors ($p=0.202$, ns) and ($p=0.876$, ns) respectively

Table 15. *Pearson's Correlation Between EO Factors and Firm Performance Factors*

Correlations						
		Non-financial	Financial	Innovativeness	Pro-activeness	Risk taking
Non-financial	**Pearson's Correlation**	1	.642**	.258**	.398**	.102
	Sig. (2-tailed)		.000	.001	.000	.202
	N	158	158	158	158	158
Financial	**Pearson's Correlation**	.642**	1	.196*	.277**	.013
	Sig. (2-tailed)	.000		.013	.000	.876
	N	158	158	158	158	158
Innovativeness	**Pearson's Correlation**	.258**	.196*	1	.649**	.622**
	Sig. (2-tailed)	.001	.013		.000	.000
	N	158	158	158	158	158
Pro-activeness	**Pearson's Correlation**	.398**	.277**	.649**	1	.426**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	158	158	158	158	158
Risk taking	**Pearson's Correlation**	.102	.013	.622**	.426**	1
	Sig. (2-tailed)	.202	.876	.000	.000	
	N	158	158	158	158	158

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

*. Correlation is significant at the 0.05 level (2-tailed).

Overall, the results confirm that there is a positive and significant relationship between EO and firm performance, thus rejecting the null hypothesis and accepting the alternate hypothesis. Focusing on the sub-hypothesis, innovativeness and proactiveness have significant relationships with both the financial and non-financial performance of the firm. The correlation revealed no relationship between risk-taking and both non-financial and financial sub-constructs of firm performance.

5.5 Moderator multiple regression analysis

5.5.1. Assumptions

Before performing the multiple regression further assumptions for the test had to be satisfied according to Pallant (2010) these included: Refer to Appendix 4.

1. ***Sample size has been established to be large enough to perform the multiple regression test.***

   The sample size for this study was found to be adequate as the 79 cases per independent variable was well above the 40 recommended by Pallant (2010).

2. ***Univariate outliers were analysed, and extreme outliers were removed.***

   One response (response 56) in EO32 – "2. People in our business are encouraged to take calculated risks with new ideas." was found to have multiple extreme outliers (3 times interquartile range) and was removed.

3. ***Normality of the data has been established.***

   All the constructs' skewness and kurtosis were found to be within ±2 (George & Mallery, 2010).

4. ***Multicollinearity of the independent variable and the dependent variable.***

Multicollinearity

The variance inflation factor (VIF) and the tolerance were calculated to investigate the multicollinearity of the data, through a normal regression in SPSS. The results are presented in Table 16.

Table 16*. Multicollinearity Statistics: VIF and Tolerance*

Independent Variables	Collinearity Statistics	
	Tolerance	VIF
Innovativeness	0.435	2.297
Proactiveness	0.534	1.874
Risk-Taking	0.599	1.669
TL	0.818	1.222

Based on the results in Table 16, the data does not have a problem with multicollinearity. The VIF results are below 10 and all the tolerance values are well above 0.1, values outside these specified limits could indicate multicollinearity (Pallant, 2010).

5.5.2. Transformational leadership moderating EO and Financial Performance

H_{20}: Transformational leadership has no moderating effect on the relationship between entrepreneurial orientation and firm performance

H_{21}: Transformational leadership has a moderating effect on the relationship between entrepreneurial orientation and firm performance

Model 1 of Hayes was used within SPSS version 25 to investigate the moderating effect of the TL on the EO-performance relationship.

Table 17 presents the moderated multiple regression for the EO and TL. All the PROCESS output matrices summaries can be viewed in Appendix 2.

Table 17*. Moderator Analysis TL on EO and Firm Performance*

Model Summary						
R	R-sq	MSE	F	df1	df2	p
0.336	0.113	0.659	6.545	3	154	0.0003

	coeff	se	t	p	LLCI	ULCI
constant	6.231	4.394	1.418	0.158	-2.449	14.911
EO	-0.841	0.794	-1.059	0.291	-2.409	0.728
TL	-1.055	1.059	-0.996	0.321	-3.015	1.037
Interaction_1-TL*EO	0.258	0.189	1.364	0.175	-0.116	0.631

The model summary shows the results of EO, firm performance and TL, the model shows R=0.336, R-square = 0.113 with $p < 0.01$ the results are significant. The interaction model confirms the non-significant effect of TL*EO – ($p = 0.175$, ns)

The results presented in Table 17 revealed that EO and TL were not significant predictors of firm performance, EO shows (β = -0.841, SE = 0.794, p =0.291, ns). Furthermore, TL output is showing (β= -1.055, SE = 1.059, *p* = 0.321, ns). The interaction effect coefficient (TL*EO) is (β = 0.258, p=0.631, ns) showing a non-significant interaction. The confidence interval of the interaction coefficient, TL*EO, is: LLCI -0.116 and ULCI 0.631 showing the

moderation effect of TL on EO and the firm performance relationship is not significant as zero can be found between the lower and upper confidence interval (LLCI and ULCI) values.

5.5.3. Transformational leadership moderating Innovativeness and Financial Performance

H_{2a0}: Transformational leadership has no moderating effect on the relationship between innovativeness and firm performance (non-financial and financial)

H_{2a1}: Transformational leadership has a moderating effect on the relationship between innovativeness and firm performance (non-financial and financial)

Table 18*. TL Moderating Innovativeness and Non-Financial Firm Performance*

Model Summary						
R	R-sq	MSE	F	df1	df2	p
0.341	0.116	0.911	6.760	3.0000	154,000	0.0003

	coeff	se	t	p	LLCI	ULCI
constant	4.787	4.785	1.001	0.319	--4.664	14.239
Innovativeness	-0.667	0.829	-0.804	0.423	-2.304	0.971
TL	-0.639	1.143	-0.559	0.577	-2.896	1.618
Interaction_1-Innovativeness*TL	0.208	0.196	1.064	0.289	-0.179	0.595

The model summary shows the results of innovativeness, non-financial firm performance and TL, the model shows R= 0.341, R-square = 0.116 with $p < 0.01$ the results are significant.

The results presented in Table 18 are the results of the moderating effect of TL on innovativeness and non -financial firm performance. Innovativeness shows (β = -0.667, SE = 0.829, p = 0.423, ns). Furthermore, TL output is showing (β= -0.639, SE = 1.143, *p* = 0.577, ns). The R^2 for the regression was 0.116. and the interaction effect coefficient (innovativeness *TL), (β = 0.208, p=0.289, ns) showing a non-significant moderating effect of TL on the innovativeness and firm non-financial performance. The interaction confidence interval is found between: LLCI -0.179 and ULCI 0.595, which show the

moderation effect of TL on the innovativeness and the non-financial firm performance relationship is not significant as zero is found between the confidence interval values. The interaction model shows the non-significant relationship of innovativeness*TL– (p=0.289, ns).

Table 19*. TL Moderating Innovativeness and Financial Firm Performance*

Model Summary						
R	R-sq	MSE	F	df1	df2	p
0.323	0.104	0.665	6.980	3.000	154.000	0.000

	coeff	se	t	p	LLCI	ULCI
constant	5.466	4.091	1.336	0.184	-2.615	13.547
Innovativeness	-0.713	0.709	-1.007	0.316	-2.113	0.687
TL	-0.784	0.977	-0.803	0.423	-2.714	1.146
Interaction_1-Innovativeness*TL	0.211	0.168	1.258	0.210	-0.120	0.542

The model summary shows the results of EO, financial firm performance and TL, the model shows R= 0.323, R-square = 0.1043 with $p < 0.01$, thus the model is significant.

The results presented in Table 19 are the results of the moderating effect of TL on innovativeness and financial firm performance. Innovativeness shows (β = -0.713, SE = 0.709, p = 0.316, ns). Furthermore, TL output is showing (β= -0.784, SE = 0.977, *p* = 0.423, ns). The R^2 for the regression was 0.104, and the interaction effect coefficient (innovativeness*TL) is (β = +0.211, p = 0.210, ns) signifying the interaction to be non-significant. The interaction coefficient interval: LLCI -0.120 and ULCI 0.542 show the moderation effect of TL on the innovativeness and the financial firm performance relationship is not significant as zero is found between confidence interval values. The interaction model shows the non-significant relationship of innovativeness*TL – (p=0.210, ns).

5.5.4. Transformational leadership moderating proactiveness and Firm Performance

H_{2b0}: Transformational leadership has no moderating effect on the relationship between proactiveness and firm performance (non-financial and financial)

H_{2b1}: Transformational leadership has a moderating effect on the relationship between proactiveness and firm performance (non-financial and financial)

Table 20. *TL Moderating Proactiveness and Non-Financial Firm Performance*

Model Summary						
R	R-sq	MSE	F	df1	df2	p
0.425	0.181	0.844	11.345	3.000	154.000	0.000

	coeff	se	t	p	LLCI	ULCI
constant	4.757	4.568	1.041	0.299	-4.268	13.782
Proactiveness	-0.553	0.848	-0.652	0.516	-2.227	1.122
TL	-0.881	1.108	-0.795	0.428	-3.070	1.308
Interaction_1 - Proactiveness*TL	0.229	0.203	1.129	0.261	-0.172	0.629

The model summary shows the results of proactiveness, non-financial firm performance and TL, the model summary shows R= 0.428, R-square = 0.183 with $p < 0.01$ indicating significant model.

Table 20 presents the results of the moderating effect of TL on proactiveness and non-financial firm performance. Proactiveness has a non-significant effect on non-financial firm performance with (β = -0.553, SE = 0.848, p = 0.516, ns). The TL output shows (β= -0.881, SE = 1.108, *p* = 0.428, ns). The interaction effect coefficient (proactiveness*TL) is (β = +0.229, p = 0.261, ns) was found to be non-significant as (p> 0.05) The interaction coefficient confidence interval LLCI -0.172 and ULCI 0.629 show the moderation effect of TL on the proactiveness and the non-financial firm performance relationship is not significant as zero is found between the interaction confidence interval values. The interaction model shows the non-significant relationship of proactiveness*TL – (p=0.261, ns).

Table 21. *TL Moderating Proactiveness and Financial Firm Performance -*

Model Summary						
R	**R-sq**	**MSE**	**F**	**df1**	**df2**	**p**
0.317	0.100	0.737	5.727	3.000	154.000	0.001

	coeff	se	t	p	LLCI	ULCI
constant	7.682	4.269	1.799	0.074	-0.751	16.116
Proactiveness	-1.041	0.792	-1.394	0.191	-2.606	0.524
TL	-1.443	1.035	-1.394	0.166	-3.488	0.603
Interaction_1 - Proactiveness*TL	0.310	0.190	1.636	0.104	-0.064	0.684

The model summary shows the results of proactiveness financial firm performance and TL, the model summary show R= 0.320, R-square = 0.102 with $p < 0.05$ indicating significant results

Based on the results presented in Table 21 it is seen that the moderating effect of transformational leadership is not significant in the relationship between proactiveness and financial firm performance. Results for proactiveness have a non-significant effect on firm performance with (β = -1.041, SE = 0.792, p = 0.191, ns). The TL output shows (β= -1.443, SE = 1.035, *p* = 0.166, ns). The interaction effect coefficient (proactiveness*TL) is (β = +0.310, p=0.104, ns) showing the non-significant effect of the moderation as p> 0.05. The int_1: LLCI -0.064 and ULCI 0.684 show the moderation effect of TL on the proactiveness and the financial firm performance relationship is not significant as zero is found between the interaction confidence interval values. The interaction model shows the non-significant relationship of proactiveness*TL – (p=0.104, ns).

5.5.5. Transformational leadership moderating Risk-taking and Firm Performance

H_{2b0}: Transformational leadership has no moderating effect on the relationship between risk-taking and firm performance (non-financial and financial)

H_{2b1}: Transformational leadership has a moderating effect on the relationship between risk-taking and firm performance (non-financial and financial)

Table 22*. TL Moderating Risk-Taking and Non-Financial Firm Performance*

Model Summary						
R	R-sq	MSE	F	df1	df2	p
0.290	0.084	0.944	4.722	3.000	154.000	0.004

	coeff	se	t	p	LLCI	ULCI
constant	4.505	4.597	0.980	0.329	-4.576	13.586
Risk-taking	0.758	0.848	-0.893	0.373	-2.433	0.918
TL	-0.309	1.088	-0.284	0.777	-2.459	1.840
Interaction_1-Risk-taking*TL	0.186	0.199	0.934	0.352	-0.207	0.579

Table 22 shows the results of non-financial performance, risk-taking and TL. The risk-taking coefficient is (β = -0.758, SE = 0.848, p =0.373, ns). with TL being (β = -0.309, SE =1.088, p =0.777, ns). The interact coefficient (risk-taking*TL) results (β = 0.186, p = 0.352, ns) show the non-significant effect of the moderator. The interaction coefficient (risk-taking*TL) confidence interval: LLCI -0.207 and ULCI 0.579 confirms a non-significant effect of the moderator, TL. The interaction model shows the non-significant relationship of risk-taking*TL – (p=0.352, ns).

Table 23*. TL Moderating Risk-Taking and Financial Firm Performance*

Model Summary						
R	R-sq	MSE	F	df1	df2	p
0.204	0.041	0.786	2.217	3.000	154.000	0.088

	coeff	se	t	p	LLCI	ULCI
constant	3.002	4.194	0.716	0.475	-5.283	11.286
Risk-taking	-0.348	0.774	-0.450	0.653	-1.877	1.180
TL	0.080	0.993	0.081	0.936	-1.881	2.041
Interaction_1 - Risk-taking*TL	0.073	0.182	0.400	0.690	-0.286	0.431

Table 23 shows the results of financial performance, risk-taking and TL, the model summary shows the results of R= 0.204, R-square = 0.041 with (p = 0.088, ns) meaning the results are non-significant. The predictor of risk-taking is (β = -0.348, SE = 0.774, p =0.653, ns). with further TL being (β= -0.080, SE = 0.993, p =0.936, ns). The interact coefficient (risk-taking*TL) results are (β = 0.073, SE = 0.182, p = 0.690, ns) with the interaction coefficient confidence interval values: LLCI = -0.286 and ULCI = 0.431

signifying a non-significant effect of the moderator, TL on the said relationship. The interaction model shows the non-significant relationship of risk-taking*TL – (p=0.690, ns).

The analysis showed that TL has no moderating outcome on the EO and firm performance relationship. . Thus, the null hypothesis will be accepted, and the alternate hypothesis rejected. The sub-hypotheses found that the moderating effect of TL has no significant effect on the relationship between innovativeness and proactiveness for both financial and non-financial firm performance. The null hypotheses will therefore be accepted, and the alternate hypotheses rejected.

The correlation confirmed no relationship between risk taking and both non-financial and financial sub-constructs of firm performance.

5.6 Conclusion

The descriptive statistics provided insight into the respondents, the firms and industries surveyed including the behaviour of the predictor and outcomes variables. The Pearson's correlation showed a significant, positive but weak relationship between EO and firm performance. Innovativeness and proactiveness had a significant relationship with firm performance. Risk-taking was however found not to have a significant relationship with firm performance.

The moderator multiple regression results found that transformational leadership has no moderating effect on the EO and firm performance relationship. The analysis further revealed no relationship between innovativeness, proactiveness and risk-taking.

CHAPTER 6

DISCUSSION OF RESULTS

6.1. Introduction

Entrepreneurial studies have been receiving extensive consideration in research. This is due to potential of these sectors to contribute to the country's economy and its greater potential to create jobs in different sectors and industries that will alleviate the country's current unemployment issues. An organisation that included *Entrepreneurial Orientation* into its strategic goals will have improved organisational performance, financial and non-financial, this based on the results of this and other research in this field.

Chapter 5 of this research presented results for a range of statistical tests performed on the data collected by means of an online survey. This chapter will discuss these results obtained and its relevance to the Chapter 2 literature reviewed in of this document. The following table presents the logical layout of the chapter and the discussion.

Table 24*. Results Summary*

Descriptive Statistics		The analysis provided insight into the biographical data of the respondents. The measures also provided better understanding of the data spread of the dependent, independent and moderator variables.
Data preparation	Reliability	Cronbach alpha of scales confirmed.
	Validity	Convergent validity was confirmed through CFA
		Discriminant validity through correlation
Hypotheses Testing	H1, H1a, H1b, H1c	All variables have been found to have a significant and positive effect with varying strength except H1c, risk-taking.
	H2, H2a, H2b, H2c	The moderation effect was found to be non-significant.

6.2 Descriptive Statistics

6.2.1 Survey Responses

The survey received a very weak response following distribution of the survey link to approximately 2 250 SMEs achieving a response rate of 6.4%. Researchers studying SMEs have highlighted the problem of a low response in their studies (Shirokova et al., 2016; Vora et al., 2012; Yang, 2008). Kothari et al. (2014) cautioned on a low response rate when using survey questionnaires to collect data. The data sample was however, considered suitable as Pallant (2010) proposed 40 case samples for every independent variable when conducting a multiple regression analysis. This study achieved 79 case samples per independent variable which is well above the recommended value.

6.2.2 Biographic Results

The survey collected four variables that were investigated to determine the biographic profile of the respondents. These included gender, age of the firm, number of the employees in the firm and the industry of the respondents.

Based on the results obtained 76% of the respondents were males. This finding is in line with the GEMS report that established a higher percentage men will get involved with entrepreneurial activities (Global Entrepreneurship Research Association, 2018). The majority of companies, 65.2% (n = 103) of the 158 respondents, have been operating for between 10 and 20 years. This finding confirms the GEMS report of that found a low rate of early stage entrepreneurship in South Africa. The survey received responses from owner-managers operating in eight different industries. The services, manufacturing and engineering industries accounted for 79.1% (n = 125) of the 158 responses received. 64.6% of the firms that responded employed less than 50 people, confirming SMEs owner-managers as respondents.

6.2.3 Scale internal consistency and Reliability

Hughes and Morgan (2007) have in their research considered the multi-dimensionality of EO and investigated the individual effects of the five EO dimensions on predicting the performance of a firm. As described in Chapter 4 of this research the researcher adapted the questionnaire by Hughes and Morgan to conduct the EO section of this research. The internal consistency of the scale used by Hughes and Morgan (2007) was above the recommended 0.7 the results were compared very well with the reliability results of the

current study which is presented in Table 24. The comparability of the items that make up the scale confirms the suitability of the scale to assess the EO of the firms that were surveyed.

Table 25*. EO Scale Comparative Cronbach's Alpha*

EO – Dimensions	Hughes and Morgan (2007)	Current Study
Innovativeness	0.81	0.87
Proactiveness	0.75	0.73
Risk-Taking	0.77	0.73

6.2.4 Transformational Leadership

The MLQ-6S scale measure the three leadership styles namely transformational leadership, transactional leadership and laissez faire presented by Northouse. TL in this study was measured using the MLQ-6S adapted by Vinger and Cilliers (2006). The scale showed internal consistency and convergent validity on all the subscales of TL. The Cronbach's alpha for this study was found to be below 0.7 with all 12 variables measured. A Cronbach's alpha of 0.729 was finally accepted following the removal of variables TL5 – "I tell others what to do if they want to be rewarded for their work" and TL7 – "I am content to let others continue working in the same way as always", to reassess the scale internal reliability of. The scale used was therefore found suitable to test the TL construct examined in this research.

6.3 Hypothesis 1

Hypothesis 1*: There is a relationship between EO and firm performance*

This hypothesis looked to determine the existence of EO and firm performance relationship of the organisations being studied. Existing research has confirmed the significant relationship that exist in the EO and firm performance relationship (Rauch et al., 2009). The positive relationship between EO and firm performance was confirmed by the meta-analysis conduct by Rauch et al. (2009), Additionally the study confirmed the research by Wiklund and Shepherd (2003) who found that firms adopting an entrepreneurial strategy generally perform better compared to firms without it. Furthermore, the literature confirmed the contingent relationship between the said constructs (Rauch et al., 2009). Research by Dimitratos et al. (2004) and Lumpkin and

Dess (2001) have however, found a lower correlation between the constructs, EO and firm performance. The results obtained by the researcher correlate closely to that of the meta-analysis by Rauch et al. (2009)

A significant and positive but weak relationship was found in this study. The research found EO to be a significant predictor of firm performance ($\beta = 0.279$, $p < 0.05$) but only predicting 7.8% of the firm's performance, refer Table 13. This means 92.2% of the organisations' performance is described or determined by other factors. This results are in line with the that obtained in the meta-analysis conducted by Rauch et al. (2009) that found a correlation of 0.242 and Engelen et al. (2014) that achieved ($\beta = 0.17$, $p < 0.01$) when studying the relationship between EO and firm performance.

The results from this study confirms the findings that EO has a positive correlation to firm performance (Gali et al., 2016; Halabí & Lussier, 2014; Van Doorn et al., 2013; Hughes & Morgan, 2007 & Rauch et al., 2009). However, the extent of the relationship seen in the studies warrant the call by Lumpkin and Dess (1996) that the contingent effect of moderators on this EO firm performance relationship should be studied.

6.3.1 Sub-Hypothesis

Hypothesis 1a: *There is a relationship between innovativeness and firm performance.*

Innovation is critical for firms to keep their customer offering updated. This is a key element to keep customers attracted to their product and offerings. The dynamism of the current business market makes this a crucial element that can ensure firm performance, both financially and non-financially. A firm's innovativeness shows the organisation's receptiveness to change in its business environments both internally and externally to the organisation (Lumpkin & Dess, 1996). What is clear from this research, innovativeness has evolved beyond the product market to the services and process industry. The services industry statistics show a high median to innovativeness. Based on the descriptive statistics it can be deduced that most of the firms consider themselves as innovative with a mean ranging between 5.71 and 5.93 (SD = 0.982) corresponding to a median of 6 for all variables.

This hypothesis is supported, as a relationship was found to be significant, positive and weak to both factors, financial and non-financial, of firm performance. Table 14 shows the correlations ($R = 0.258$, $p<0.01$) and ($R = 0.196$, $p<0.05$) for non-financial and financial performance respectively. The regression analysis conducted showed a significant relationship between the firm performance ($\beta=0.248$, $p< 0.05$). Innovativeness

is a significant predictor of firm performance F = 18.813 and p<0.05 but only predict 7% of firm performance. The results of this study confirms the findings by Arshad et al. (2014), Hughes & Morgan (2007) and Rauch et al. (2009) that confirmed innovativeness is related to firm performance.

Innovativeness also show a high correlation to both proactiveness and risk-taking. The idea of disrupting the business environment through new and innovative ideas does entail a large measure of proactiveness and risk-taking to achieve a measure of performance. This confirms the significant relation between the variable.

Hypothesis 1b: *There is a relationship between proactiveness and firm performance.*

Proactiveness is a firm's ability to navigate their business environment and adapt to act according to the needs of their customers. The firm's ability to predict future problems and find solutions, would place them at a distinct advantage in that the firm can benefit and exploit the first mover advantage (Rauch et al., 2009). This can lead to significant benefits for the organisation as price can be determine by the initiator who creates the demand and fulfils the supply. The results presented in Table 9, show firms consider themselves less proactive when compared to innovativeness.

The research found a significant, positive medium and weak relationship with non-financial and financial factors respectively, of firm performance, this is however more significant when compared to innovativeness and risk-taking. Table 14 shows the following correlations ($R= 0.398$, $P < 0.01$) and ($R = 0.277$, $P < 0.05$) for non-financial and financial performance respectively. The regression analysis shows a significant and positive relationship of proactiveness to firm performance ($F = 23.939$, $p < 0.05$). Proactiveness is a significant predictor ($\beta = 0.365$, $p < 0.05$) and predicts 12.7% of firm performance, confirming the correlation results. This study's findings are in line with the findings by Engelen et al. (2013), Rauch et al. (2009) and Lumpkin and Dess (1996) that found a positive relationship between proactiveness firm performance.

Firms should consider the short product life cycle as demands from consumers change at an alarming rate. Adopting a proactive approach to product development can ensure company's future profits in a dynamic and uncertain market (Rauch et al., 2009).

The results clearly show that the firms were proactive that have realised the benefit in being the leader in the market. The results clearly show there is a higher correlation to

firm performance compared to the other EO factors. The higher correlation to innovativeness and risk-taking could associate proactiveness with the being innovative and that it involves a measure of calculated risk.

Hypothesis 1c: *There is a relationship between risk-taking and firm performance.*

This hypothesis is not supported and is refuted on both factors firm-performance variables. Table 14 shows the following correlations (R = 0.102, p=.202, ns) and (R = 0.013, p=.876, ns) risk-taking and non-financial and financial firm performance respectively showing a non-significant relationship between the constructs (Pallant, 2010). The results obtained in this study confirms the research findings by Hughes and Morgan (2007) and Le Roux and Bengesi (2014) that found no significant relationship between risk-taking and firm performance.

The research shows risk-taking correlate highly with innovativeness and proactiveness, showing a measure of risk involved in practicing these two behaviours. This could indicate risk-taking behaviour being necessary to promote innovation and proactiveness in an organisation. All business operates with a measure of risk, and owner managers will calculate the risk to reward benefit before making decisions (Wiklund & Shepherd, 2005).

6.3.2 Hypothesis 1 Discussion

The descriptive statistics show that on the 7-point Likert scale the respondent's mean response for the dimensions of EO were 5.846, 5.525 and 5.383 for innovativeness, proactiveness and risk-taking respectively with standard deviations of 0.857, 0.742 and 1.074 respectively for each of the dimensions. These results show respondent believe their organisations have an above average predisposition towards EO.

Miller (1983) introduced the dimensions of EO as innovativeness, risk-taking and proactiveness. These three dimensions were initially considered to be unidimensional, meaning a firm should exhibit all three to be considered entrepreneurially orientated. Two additional dimensions, competitive aggressiveness and autonomy, was introduced by Lumpkin and Dess (1996) to extend the total number of dimension for measuring EO to five. The study by Lumpkin and Dess (1996) confirmed that EO should be considered a multi-dimensional construct as a firm could exhibit different levels or different

combinations of the named dimensions and be considered entrepreneurial and can positively predict a firm's performance (Rauch et al., 2009).

Results presented show no correlation between risk-taking and firm performance. Risks are seen by organisation as a pledge of large assets with uncertain or unknown outcomes (Lumpkin & Dess, 1996). This makes it difficult for an SME to commit to high risk with the low resource availability. This finding may be more significant in emerging markets where SMEs operate with limited resources and very little regulatory support.

These presented results clearly show the complex nature of the EO and firm performance relationship as also presented in the work by Lumpkin and Dess (1996) and later by Engelen et al. (2013) . The findings show that not all dimensions of EO can be considered important for firm performance (Hughes & Morgan, 2007). Based on the descriptive statistics presented in Table 9, it is seen that consistent practice of all dimension of EO will not result in a consistent performance benefit of the firms.

This research confirms the findings that EO will result in improved firm performance (Lumpkin & Dess, 1996; Rauch et al., 2009; Wales et al., 2013). However, organisational leaders should assess the allocation of resource against the performance benefit the firm can gain through the adoption of EO and its dimensions. Additionally the findings support the research findings by Hughes and Morgan (2007), Covin and Wales (2012), Lumpkin and Dess (2001), that states an entrepreneurial firm can display different levels of the EO dimensions in any combinations and be considered entrepreneurially orientated, and will improve a firm's performance.

6.4 Hypothesis 2

Hypothesis 2-0: *Transformational leadership has no moderating effect on the relationship between entrepreneurial orientation and firm performance.*

Existing research highlighted the varying results and different strengths of the EO-performance relationship. Lumpkin and Dess (1996) encouraged the introduction of moderators into the EO-performance relationship to investigate the effect on the said relationship, with the early studies focusing more on external moderators. The literature review in Chapter 2 highlighted the effect of different moderators, (refer to Table 2), internal and external to the organisation, and the affect these would have on the EO-performance relationship. This study introduced TL as a moderating variable into the EO-

performance relationship to determine if the relationship could be strengthened. Based on the literature review, the only other study that examined this interaction was Engelen et al. (2013).

The descriptive statistics show most of the respondents indicate higher practices of transformational leadership, with variable TL6, TL4 and TL3 indicating “fairly often” for these questions and “Once in a while” and “Sometimes” (Less frequent) for variables TL7, TL5 and TL2. The moderated multiple regression analysis results confirm TL will not moderate the EO-performance relationship, refer Table 16, with the lower confidence interval = -0.1155 and the upper confidence interval = 0.6308, meaning zero is found between the confidence intervals. This indicate no moderation by the interaction variable, EO*TL.

This finding does not support the study by the Engelen et al. (2013) that found that EO and firm performance are positively moderated by the TL behaviours, meaning the higher the score by top management the higher the influence. This result also does not support the empirical research that the EO performance effect is supported by top management (Wales, 2016). As a strategic intent of an organisation management input into adoption and resource allocation will determine success of the strategy. Anderson et al. (2015) have in their EO reconceptualising model reclassified risk-taking as attitudinal based manager’s propensity to risk and innovativeness and proactiveness as behavioural attitudes and stating a firm should have both dimensions to be classified entrepreneurial, also indicating manager’s influence on entrepreneurial strategy of the firm.

The characteristics of transformational leaders allows them to empower employees to think independently and make collaborative decisions towards the goals of the organisation (Aziz et al., 2013). The emotive nature of TL and the fact that most of the respondents were male may be the reason why TL had no moderating effect in this study. South Africa has a masculine culture, according to Hofstede’s five value dimension of national culture (Robbins & Judge, 2015).

South Africa has a culture of assertiveness and materialism that opposes the emotive nature of TL. With the high number of male respondents TL may be perceived as a “softer” way of managing employees. These male leaders having operated in these industries for many years, more than 89% of firms having operated more than 10 years, may not see the sense in this leadership style as they consider their firms successful and performing.

The descriptive statistics show that most of the respondents believe they practice TL style however, the researcher opines that most of the respondents are extensively involved in the operational aspects of their respective firms. Thus, not completely allowing followers to make and decisions or not completely develop a trusting relationship that could see them divorcing themselves from operation and leading employees to work towards the organisational goals. As EO is a firm level strategy, it is important for all levels of organisations to be involved in adoption of and development of competence to execute the strategy (Lomberg et al., 2017).

Most of the South African workforce are unionised and getting employees in this, hostile type of environment to perform beyond their own interest would require a unique culture change. Urban and Govender (2000) advised that managers looking at adopting a TL style of leading would have to develop new ways of thinking. For 89% of these organisations in this study having operated “successfully” for more than 10 years would be very difficult or impossible without changing the organisational culture.

6.4.1 Sub-Hypothesis

Hypothesis 2a0*: Transformational leadership has no moderating effect on the relationship between innovativeness and firm performance (non-financial and financial)*

The null hypothesis was accepted as the results show TL has no moderating effect on the relationship that exist between innovativeness and the firm financial and non-financial performance

This result is unexpected as innovation, being an organisation’s willingness to introduce new products and processes thereby disrupting market and industries, would form part of an organisational strategy that would require management endorsement (Rauch et al., 2009). This disrupting characteristic of innovativeness can lead to improved firm performance, this has been proven empirically by Engelen et al. (2013) and Yang (2008).

Innovativeness is a resource intense characteristic in organisations (Lonial & Carter, 2015). This attribute does have a measure of risk associated with it, as development of an untested product may not see immediate adoption by users or customers. Based on the age of the organisations in the survey it can be assumed they have adopted a conservative approach to business and see innovation and its disruptive nature as a risk to their organisations. Risk aversion would be a strategy pursued by owner-managers of the firms. This clarifies the absence of TL moderation on the innovativeness and firm performance, both financial and non-financial, relationship.

***Hypothesis 2b0**: Transformational leadership has no moderating effect on the relationship between proactiveness and firm performance (non-financial and financial)*

The null hypothesis was accepted as the results show no moderating influence of TL on the performance relationship between proactiveness and the financial and non-financial performance of the firms.

Being first to market will allow firms to enjoy monopoly rent, allowing the firm to set prices, as customers have limited choice (Lumpkin & Dess, 1996). This will result in financial and non-financial performance for the firm. Management involvement in the entire process is important as this could be a resource intensive strategy. Management need to determine the resource allocation to drive a development. Sales need to sell a product to customers, marketing need to persuade the customer that this development is the best and only solution to their challenge and operation need to deliver the development to the customer. Management's facilitation of these processes will ensure smooth interaction at all these levels and will determine the success of the firm. Managements' realisation of products shorter life-cycle will allow them to prepare for future profits by acting fast and decisive to customer's needs by facilitating the organisation wide interaction to customer service delivery and firm performance.

The results in this study confirmed the research by Brouthers et al. (2015) who confirmed proactiveness in a firm contains a measure risk. For SMEs in emerging markets that have very little regulatory support, the risk in undertaking a project where the outcome is uncertain could mean the difference between closing the business or sustained operations (Le Roux & Bengesi, 2014). This is in line with the GEMS (2018) report that have classified South Africa as an opportunity motivated market when referring to SMEs meaning entrepreneurs ensure the need exist before investing or undertaking any risky investment.

***Hypothesis 2c0**: Transformational leadership has no moderating effect on the relationship between risk-taking and firm performance (non-financial and financial)*

The null hypothesis is rejected as the results show no moderating influence of TL on the relationship between the risk a firm undertakes and the firm's performance, both financial and non-financial.

The results from this study show that risk-taking does not have a significant influence on either the financial or non-financial performance of a firm. This could be due to the risk

averse nature of the respondents or the current economic situation facing the South African economy. Committing a significant portion of an organisations resources without a clear indication of the benefit or outcome may be the reason for the results in the research (Kellermanns et al., 2016).

South African SMEs have very little support in terms of regulation or support from government (Le Roux & Bengesi, 2014). Without the necessary support and limited resources SME owner-managers will most likely engage in a risk averse strategy where outcomes are clear and tangible. TL by its characteristics will allow employees to make decisions based on the goals of the organisation. The researcher opines that owner-managers see this as a risk to the organisation. TL style promotes the dimensions of EO in that the organisation's goals and vision is shared with the employees. Transformational leaders promote free thinking that is key to innovativeness and proactiveness.

6.4.2 Hypothesis 2 Discussion

The results obtained were unexpected. EO is a strategic intent on the part of a firm to be entrepreneurial (Anderson et al., 2015; Wales, 2016). Management forms a pivotal role in not only strategically establishing the organisational goals, but also allocating the limited resource in executing the firm strategy. Transformational leaders communicate goals to employees and motivate them through their charisma to achieve the organisational goals by focussing on the greater needs instead of self (Northouse, 2001).

The research by Engelen et al. (2013) is the only published study that investigated the TL or any other leadership style as a moderator in the EO-performance relationship. Engelen et al. (2013) inferred "without manager's pursuit to transformational behaviours, the conversion of EO into superior performance is incomplete" suggesting an interdependence between TL and EO (p.1089). The findings in the research by Engelen et al. (2013) show that the multi-dimensional characteristics of TL behaviour was considered as the moderators in the study. Additionally, the research found that leaders do not have to exhibit all six of the identified behaviours to influence the EO-performance relationship. However, should one of the behaviours not be present the it would limit the effectiveness of relationship (Engelen et al., 2013).

6.4.3 Exploring reasons for non-significant moderation

Due to the unexpected results obtained, the researcher explored possible reasons for the difference in the results. This task was made more complex due to the limited existing research exploring considering TL as a moderating variable in the EO-performance relationship of organisations. The design difference between the research by Engelen et al. (2013) and this research are noteworthy and may have different implications based on the organisation leader's understanding:

a. Research Design differences

- This research surveyed South African SMEs across different regions of Southern African. The study by Engelen et al. (2013) suveyed six countries which included Europe, the United State and Thailand.
- This study considered the *transformational leadership factors*, although not explicitly mentioned, that include the four I's namely idealised influence, inspirational motivation, intellectual stimulation and individualised consideration (Northouse, 2001). Engelen et al. (2013) considered *transformational leadership behaviour* which included:
    - Identifying and articulating a vision,
    - provide an appropriate role model,
    - acceptance of group goals,
    - high expectations,
    - individualised support,
    - intellectual stimulation.
- The studies also used different scales to assess the level of transformational leadership in the organisations.
- Both studies were directed at firm leaders.

The marked differences between demographic and geographic placement could have influenced the results. The observed differences in SME support between emerging economies and established economies are significant. Additionally, developed countries have significantly more resources available, that would be able to support their entrepreneurial strategies, when likened to that in emerging economies (Herrington et al., 2017). The current economic and political situation may have influenced responses from the different respondents of the survey.

b. Transformational Leadership Measures

Table 26. *Behavioural Components of Transformational Leadership.*

Leadership behaviour	Northouse (2001)
Identifying and articulting a vision	Idealised Influence (Charisma)
Provide an appropriate role model	Idealised Influence (Charisma)
Acceptance of group goals,	
High expectations	Inspirational leader behaviour
Individualised support	Individualised consideration
Intellectual stimulation	Intellectual stimulation

Table 25 adapted from Podsakoff et al. (1990) show alignment between the factors considered in the work by Engelen et al. (2013) and the TL factors, apart for “acceptance of group goals”. This behaviour was however rejected in the study by Engelen et al. (2013) and found not to be significant in the EO and firm performance relationship. Thus, the measures may have had a minimal influence in the difference in results observed.

c. Differences in scales used in the research

The different scales used for the two studies may be an additional reason why different results were obtained during this study. Engelen et al. (2013) used the Transformational Leadership Inventory (TLI) to collect the responses for the six behavioural components of TL. An adapted Multifactor Leadership Questionnaire (MLQ form 6S) form from Vinger and Cilliers (2006) was used to collect managers responses to the TL factors. Therefore, the difference in measures and the variables examined may have resulted in different responses from the respondent of the two studies.

6.5 Conclusion

The research findings for hypothesis 1 support the literature and confirm the significant, positive but weak relationship between the EO and firm performance. The results obtained by the sub-hypothesis supports the multidimensionality found in the studies by Lumpkin and Dess (1996) and Hughes and Morgan (2007). The research results

confirmed innovativeness and proactiveness having a significant, positive but weak relationship to firm performance. Risk-taking however, was found not to have any correlation to firm performance.

Chapter 2 presents the literature review of this research paper it shows the absence of research looking at TL or leadership in general as a moderating variable in the relationship between EO and firm performance. The results of this study are therefore significant in that the findings completely contradicts the single other research considering TL as a moderator in the said relationship. To conclusively determine if TL would moderate the EO-performance relationship, this study should be repeated by simulating the study by Engelen in a South African business setting, to eliminate some of the difference that may have contributed to the result in this study.

Existing literature reviewed in Chapter 2 confirmed the positive effect TL has on firm performance. This was however not explicitly measured and reported in this research.

The research framework model was adapted to illustrate the results of the research findings, refer to Figure 6. The red lines indicate that the research proved no moderating effect of TL on the EO-performance relationship or the three dimensions of EO. Furthermore, risk-taking has found not to have any correlation with firm performance, financial or non-financial.

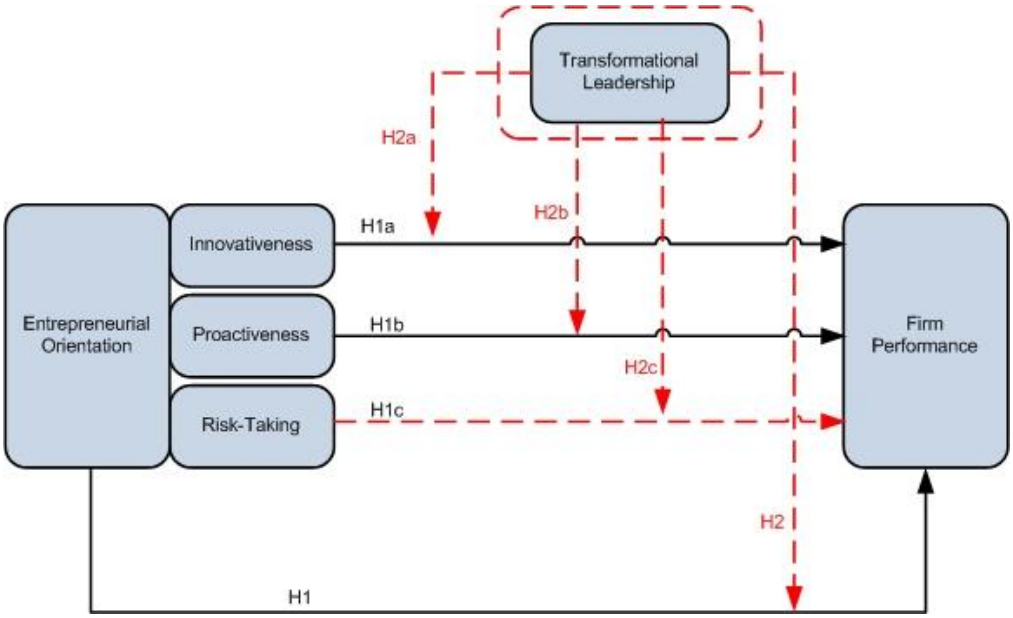


Figure 6. Reviewed Research Framework

CHAPTER 7

CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

This chapter will underline the principle results of this study, and to underline the management and business implications, the research limitations are defined and the document is concluded with recommendations for future studies in the field of entrepreneurship research are provided.

This study tested three of the five dimensions of EO against the financial and non-financial performance of South African SMEs. The same dimensions were considered to investigate if TL would moderate the established relationship between EO and firm performance.

7.2 Research Findings

The research validated the existing instruments for the empirical investigation of EO, TL and firm performance in a South African context considering various industries. The instrument having been used in different studies showed good correlation in term of findings and reliability.

The study extended the work by Lumpkin and Dess (1996) and Rauch et al. (2009) that noted the complex nature of the EO-performance relations and proposed the introduction of a contingency variable(s) into the EO-performance relationship. Chapter 2, Table 2 of this document presents existing research and results of moderator variable introduced into the EO-performance relationship, the table also highlights the scant research introducing TL as a moderating variable in the established performance relationship between EO and the firm.

Chapter 3 of this document presented the hypotheses that were tested. The first hypothesis showed that there is a significant correlation between the EO strategy a firm adopts and the performance the firm will deliver. The dimensions, innovativeness and proactiveness was also found to be significant predictors of both financial and non-

financial performance of SMEs in South Africa. Risk-taking did however not show any relation to firm-performance. This speaks to the risk averse nature of SME owner-managers who looks at the sustainability of their organisation as a measure of performance. The work by Lumpkin and Dess (1996) and Hughes and Morgan (2007) emphasised the multidimensionality of EO, the findings of this research study therefore supports the findings of the aforementioned studies. The results found that innovativeness and proactiveness have significant relationship with both financial and non-financial firm performance. Risk-taking, was however found not to have any relationship with firm performance, thereby supporting the findings by Lumpkin and Dess (1996) and Hughes and Morgan (2007) that a firm does not have to display all the dimensions to the same extent.

The second hypothesis found that the moderating effect of transformational leadership is not significant in the EO and firm performance relationship, specifically looking at South African SMEs across varying industries. The result obtained opposed the findings in the literature that posit the moderating effect of a transformational leader in improved firm performance (Engelen et al., 2013). A performance assessment study should preferably be conducted as a longitudinal study, where the implementation of the construct can be investigated over a longer time span. TL has been shown to positively predict to firm performance (Darroll & Corrigan, 2013; Du, Swaen, Lindgreen, & Sen, 2013; Yang, 2008). Based on the results from these papers, the researcher anticipated an increase in the strength of the EO-performance relationship.

7.3 Managerial Implications

A significant, positive but weak relationship was found between the studied constructs, EO and firm performance. A positive R^2 equating to 0.078 imply only 7.8% of the firm performance can be described by the firm's EO, this is a significantly low number. EO is a resource intense strategy and can be very onerous for small firms to adopt (Wiklund & Shepherd, 2003). The supported findings that EO can predict firm performance could see firms misallocate scarce resources to entrepreneurial orientation and not realising the payback of their investment. Findings from this research show, the contribution of the different factors of EO are disproportionate and do not contribute equally to the performance benefits of an organisation. Lonial and Carter (2015) also highlighted the resource dependence of EO.

Allocating resources to strategic activities that do not benefit the organisation can lead to ineffective strategic direction that can negatively affect the firm's performance. It is therefore important that business owners should be conscious of the performance benefits of all factors that could affect a firm's performance and allocate resources to maximise the benefits. The importance of an EO strategy should not be discounted as research has found that firms that have adopted an EO outperform organisations without an EO orientation (Rauch et al., 2009).

The risk averse nature of South African business leaders is evident in the results, with no correlation being found between risk-taking and the performance of the surveyed firms. The lack of resources, primarily financial, means business leaders carefully consider all risks before making significant and expensive investment decisions. Non-managerial employees will resist engaging in risky behaviour (Wang et al., 2011). Managers ultimately become responsible making risky decisions, being in a better position to assess risks faced by the organisation (Wang et al., 2011).

Entrepreneurial orientation is a firmwide phenomenon that should normally be implemented by all employees in the organisation. As a strategic orientation towards entrepreneurship it would therefore require firmwide adoption of an entrepreneurial culture requiring leadership influence. Operative implementation of an EO strategy would indicate leaders' willingness to involve employees in setting and fulfilling the goals of the organisation. For South African firms, performance can be seen as survival into the next years of business.

7.4 Theoretical Implications

This research contributes to the study of entrepreneurship and leadership in emerging economies, typically South Africa. The study further confirms findings by Rauch et al. (2009) that EO positively effects the performance of a firm, focusing on South African SMEs. Results obtained in this study highlights the inherent differences that may exist when considering entrepreneurship, entrepreneurial orientation and transformational leadership between developed and emerging economies.

The study examined how TL as a firm resource could influence the EO-performance relationship, although the study found no moderating effect by TL on the said relationship, the literature reviewed several studies, refer to Table 2, that proposed alternative factors that could be introduced as moderating variables in the EO-

performance relationship. Thus, the study present proposals that could be investigated as measures to improve firm performance.

7.5 Limitations of the research

This section of the research will discuss possible factors that may have impacted results obtained.

- The sample size is relatively small when compared to the sample size of studies presented in the literature review. The sample size was small but adequate for the study.
- A cross-sectional research study does not allow the full investigation of the performance effects on the organisation. A longitudinal study would therefore be more suited to the assess performance in a firm
- The study considered transformational leadership as an unidimensional construct. Consideration of the transformational leadership factors could give insight into the different factors and how they could possibly moderate the EO and firm performance relationship.
- This study was conducted looking at the SME from different sectors and from different regions in South Africa. The variability between regions and industries may have influence responses.
- Organisational leaders see the performance of their firms as a reflection of their own performance as leaders of the organisation. The research was intended to get the perspective of owner-manager, this may have biased the leadership responses.

7.6 Document Conclusion and Future Studies

The research study set out to confirm how the presence of EO in a firm will improve the performance of the firm. The instrument by Hughes and Morgan (2007) used to determine the level of EO in the surveyed firms was useful to assess a firm's performance through the presence of EO in the organisation. The research findings confirmed that EO is a significant predictor of the firm performance. TL moderating the EO and firm performance relationship did not yield the results that the researcher was expecting, as

TL was found to have a noteworthy influence on the performance of an organisation as an independent variable (Katou, 2015; Yang, 2008). Other significant insights could be taken from the findings of this study.

Most of the respondents considered themselves as entrepreneurially orientated, however the sample of respondents showed a very risk averse approach to the entrepreneurship. This study confirmed organisations do not have to portray all factors of entrepreneurship to be regarded as entrepreneurially orientated (Hughes & Morgan, 2007). The results obtained is consistent the meta-analysis by Rauch et al. (2009) and Engelen et al. (2013) that found the very low level of prediction of firm performance by EO.

The moderating effect by TL was found to be non-significant, ($p>0.05$) in the EO-performance relationship. As a firm's strategic orientation an organisation's leadership should be the key to the decisions of EO. The results are also inconsistent with the finding by Engelen et al. (2013). However, the researcher has pointed out some differences that may have influenced the results.

To this end, further research is required into the contingent relationship of EO and firm performance and how SME can exploit *internal organisational factors* to improve the size of EO and firm performance relationship.

Future research could look at adopting multiple methods of collecting data. It is also recommended to consider this research as a mixed method research to eliminate the uncertainty. A study should be conduct as a longitudinal study to evaluate the impact of the predictor variables on the outcome variable over an extended period. Similar to the study presented by Engelen et al. (2013). Finally, a similar study could be conducted to introduce the input from employees regarding their perception of the leadership style in their organisation.

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APPENDIX 1: RESEARCH QUESTIONAIRE

Biographic Data		
Gender	Male	
	Female	
Firm Age	Less than 5 years	
	Between 5 and 10 years	
	Between 10 and 20 years	
	More than 20 years	
Nr Employees	Less than 50	
	Between 50and 100	
	Between 100 and 200	
Industry	Manufacturing	
	Services	
	Logistics and Transport	
	Financial Services	
	Engineering	
	Construction	
	Catering	
	Retail	

Section 1

TRANSFORMATIONAL LEADERSHIP

Likert Scale

1	Not at All
2	Once in a while
3	Sometimes
4	Fairly often
5	Frequently

	1	2	3	4	5
1. I make others feel good to be around me.					
2. I express with a few simple words what we could and should do.					
3. I enable others to think about old problems in new ways.					
4. I help others develop themselves					
5. I tell others what to do if they want to be rewarded for their work					
6. I am satisfied when others meet agreed-upon standard					
7. I am content to let others continue working in the same way as always					
8. Others have complete faith in me.					
9. I provide appealing images about what we can do.					
10. I provide others with new ways of looking at puzzling things.					
11. I let others know how I think they are doing.					
12. I provide recognition/rewards when others reach their goals.					

Section 2

Entrepreneurial Orientation

Likert Scale

1	Strongly Disagree
2	Disagree
3	Partially Disagree
4	Neutral
5	Partially Agree
6	Agree
7	Strongly Agree

	1	2	3	4	5	6	7
Innovativeness							
1. We actively introduce improvements and innovations in our business.							
2. Our business is creative in its methods of operation.							
3. Our business seeks out new ways to do things.							
Proactiveness							
1. We always try to take the initiative in every situation (e.g., against competitors, in projects when working with others).							
2. We excel at identifying opportunities.							
3. We initiate actions to which other organizations respond.							
Risk Taking							
1. The term “risk taker” is considered a positive attribute for people in our business.							
2. People in our business are encouraged to take calculated risks with new ideas.							
3. Our business emphasizes both exploration and experimentation for opportunities.							

Section 3

Firm Performance

Likert Scale

1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

Performance		1	2	3	4	5
Non-financial	1.1 Number of Employees					
	1.2 Market Share					
	2. Our firm's growth rate is satisfying					
	3. Our market share is increasing faster than those of our competitors.					
Financial	1. We are satisfied with the returns on corporate investments.					
	2. We have a higher Return on Investment (ROI) than our competitors.					
	3. We are satisfied with our return on sales.					

APPENDIX 2: DATA CLEANING

1. Missing value analysis

- Missing value analysis was conducted to check if there are no responses that have high variables non-responsiveness as this will create bias.
- Guidelines by Schafer (1999) is 5%
- In the data the highest is 0.6%, so issues with missing data

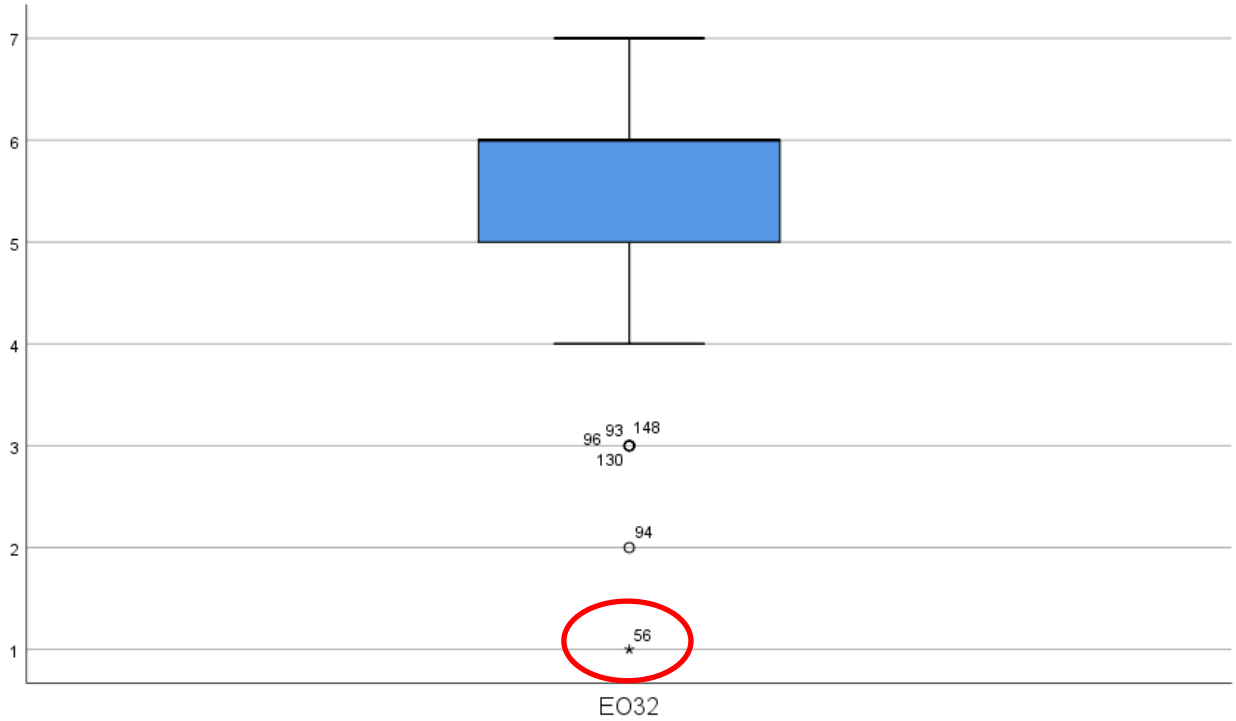
Univariate Statistics			
	N	Missing	
		Count	Percent
Gender	159	0	0,0
Age	159	0	0,0
Employees	159	0	0,0
Industry	159	0	0,0
TL1	159	0	0,0
TL2	159	0	0,0
TL3	159	0	0,0
TL4	159	0	0,0
TL5	159	0	0,0
TL6	159	0	0,0
TL7	159	0	0,0
TL8	159	0	0,0
TL9	159	0	0,0
TL10	159	0	0,0
TL11	159	0	0,0
TL12	159	0	0,0
EO11	159	0	0,0
EO12	159	0	0,0
EO13	159	0	0,0
EO21	159	0	0,0
EO22	159	0	0,0
EO23	159	0	0,0
EO31	159	0	0,0
EO32	159	0	0,0
EO33	159	0	0,0

P1	159	0	0,0
P2	158	1	0,6
P3	159	0	0,0
P4	159	0	0,0
P5	159	0	0,0
P6	159	0	0,0
P7	159	0	0,0

2. Univariate outliers

- Univariate outliers were analysed, and none of the variables had an extreme outlier (3 x interquartile range) except point 56 in EO32, which was removed from the data.
- Outliers which were at 1.5 times interquartile range were retained.

EO32



APPENDIX 3: MODERATION OUTPUT SPSS PROCESS V3.

Table 27. Matrix Summary for Firm Performance and EO

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 3.00 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : FP
    X  : EO
    W  : TL

Sample
Size:  158

**************************************************************************
OUTCOME VARIABLE:
 F*P

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,3363      ,1131      ,6592     6,5448     3,0000   154,0000
,0003

Model
              coeff         se          t          p       LLCI       ULCI
constant     6,2313     4,3939     1,4182      ,1582    -2,4489    14,9114
EO           -,8406      ,7939    -1,0588      ,2914    -2,4090      ,7278
TL          -1,0549     1,0590     -,9961      ,3208    -3,1470     1,0372
Int_1         ,2576      ,1889     1,3638      ,1746     -,1155      ,6308

Product terms key:
 Int_1    :        EO       x        TL

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0107     1,8601     1,0000   154,0000      ,1746

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000
```

Table 28. Matrix summary of Non-Financial Performance and Innovativeness

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 3.00 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : NFPerf
    X  : Innov
    W  : TL

Sample
Size:  158

**************************************************************************
OUTCOME VARIABLE:
 NFPerf

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,3411      ,1164      ,9107     6,7599     3,0000   154,0000
,0003

Model
              coeff         se          t          p       LLCI       ULCI
constant     4,7873     4,7845     1,0006      ,3186    -4,6644    14,2391
Innov        -,6666      ,8289     -,8042      ,4225    -2,3041      ,9709
TL           -,6389     1,1426     -,5592      ,5768    -2,8961     1,6182
Int_1         ,2084      ,1959     1,0637      ,2891     -,1786      ,5953

Product terms key:
 Int_1    :        Innov    x        TL

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0065     1,1315     1,0000   154,0000      ,2891

********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000
```

Table 29. Matrix summary of financial performance and innovativeness

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.00 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : FP
    X  : Innov
    W  : TL

Sample
Size:  158

**************************************************************************
OUTCOME VARIABLE:
 FP

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,3230      ,1043      ,6657     5,9803     3,0000   154,0000
,0007

Model
              coeff         se          t          p       LLCI       ULCI
constant     5,4655     4,0906     1,3361      ,1835    -2,6154    13,5465
Innov        -,7134      ,7087    -1,0066      ,3157    -2,1134      ,6867
TL           -,7843      ,9769     -,8029      ,4233    -2,7141     1,1455
Int_1         ,2107      ,1675     1,2581      ,2103     -,1202      ,5415

Product terms key:
 Int_1    :        Innov    x        TL

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0092     1,5827     1,0000   154,0000      ,2103

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000
```

Table 30. Matrix summary of Non-financial performance and Proactiveness

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 3.00 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : NFPerf
    X  : PAct
    W  : TL

Sample
Size:  158

**************************************************************************
OUTCOME VARIABLE:
 NFPerf

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,4254      ,1810      ,8441    11,3448     3,0000   154,0000
,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     4,7570     4,5682     1,0413      ,2994    -4,2675    13,7815
PAct         -,5525      ,8476     -,6518      ,5155    -2,2270     1,1219
TL           -,8810     1,1078     -,7953      ,4277    -3,0695     1,3075
Int_1         ,2287      ,2026     1,1287      ,2608     -,1715      ,6289

Product terms key:
 Int_1    :        PAct     x        TL

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0068     1,2741     1,0000   154,0000      ,2608

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000
```

Table 31.Matrix summary of financial performance and Proactiveness

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.00 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : FPerf
    X  : PAct
    W  : TL

Sample
Size:  158

**************************************************************************
OUTCOME VARIABLE:
 FPerf

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,3168      ,1004      ,7372     5,7271     3,0000   154,0000
,0010

Model
              coeff         se          t          p       LLCI       ULCI
constant     7,6824     4,2691     1,7995      ,0739     -,7512    16,1161
PAct        -1,0413      ,7921    -1,3146      ,1906    -2,6061      ,5235
TL          -1,4427     1,0353    -1,3935      ,1655    -3,4879      ,6025
Int_1         ,3096      ,1893     1,6353      ,1040     -,0644      ,6836

Product terms key:
 Int_1    :        PAct     x        TL

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0156     2,6742     1,0000   154,0000      ,1040

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

------ END MATRIX -----
```

Table 32. Matrix summary of Non-financial performance and Risk-Taking

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.00 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : NFPerf
    X  : RTak
    W  : TL

Sample
Size:  158

**************************************************************************
OUTCOME VARIABLE:
 NFPerf

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,2902      ,0842      ,9438     4,7215     3,0000   154,0000
,0035

Model
              coeff         se          t          p       LLCI       ULCI
constant     4,5052     4,5968      ,9801      ,3286    -4,5757    13,5861
RTak         -,7575      ,8483     -,8929      ,3733    -2,4333      ,9184
TL           -,3093     1,0881     -,2843      ,7766    -2,4588     1,8402
Int_1         ,1858      ,1990      ,9337      ,3519     -,2073      ,5790

Product terms key:
 Int_1    :        RTak     x        TL

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0052      ,8717     1,0000   154,0000      ,3519

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000
```

Table 33. Matrix summary of financial performance and Risk-Taking

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.00 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : FPerf
    X  : RTak
    W  : TL

Sample
Size:  158

**************************************************************************
OUTCOME VARIABLE:
 FPerf

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,2035      ,0414      ,7855     2,2170     3,0000   154,0000
,0884

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,0018     4,1935      ,7158      ,4752    -5,2825    11,2861
RTak         -,3484      ,7739     -,4502      ,6532    -1,8773     1,1804
TL            ,0800      ,9926      ,0806      ,9359    -1,8809     2,0409
Int_1         ,0727      ,1816      ,4002      ,6896     -,2860      ,4313

Product terms key:
 Int_1    :        RTak     x        TL

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0010      ,1601     1,0000   154,0000      ,6896

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000
```

APPENDIX 4 – MULTIPLE REGRESSION ASSUMPTIONS

Serial Correlation -Innovativeness, Proactiveness, Risk taking

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.407[a]	.166	.150	.92714	1.929

a. Predictors: (Constant), Innovation, Risk taking, Pro-activeness

b. Dependent Variable: Non-financial

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.344	3	8.781	10.215	.000[b]
	Residual	132.378	154	.860		
	Total	158.722	157			

a. Dependent Variable: Non-financial

b. Predictors: (Constant), Innovation, Risk taking, Pro-activeness

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.947	.555		1.706	.090
	Risk taking	-.115	.098	-.109	-1.164	.246
	Pro-activeness	.471	.113	.403	4.167	.000
	Innovation	.072	.125	.064	.573	.568

a. Dependent Variable: Non-financial

Durbin Watson of 1.929 should that there is independence of the variables – there is no serial correlation.

Serial Correlation – Entrepreneurial Orientation

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.279[a]	.078	.072	.82264	1.827

a. Predictors: (Constant), Entrepreneurial orientation

b. Dependent Variable: Firm Performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.894	1	8.894	13.143	.000[b]
	Residual	105.570	156	.677		
	Total	114.464	157			

a. Dependent Variable: Firm Performance

b. Predictors: (Constant), Entrepreneurial orientation

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.425	.491		2.900	.004
	Entrepreneurial orientation	.312	.086	.279	3.625	.000

a. Dependent Variable: Firm Performance

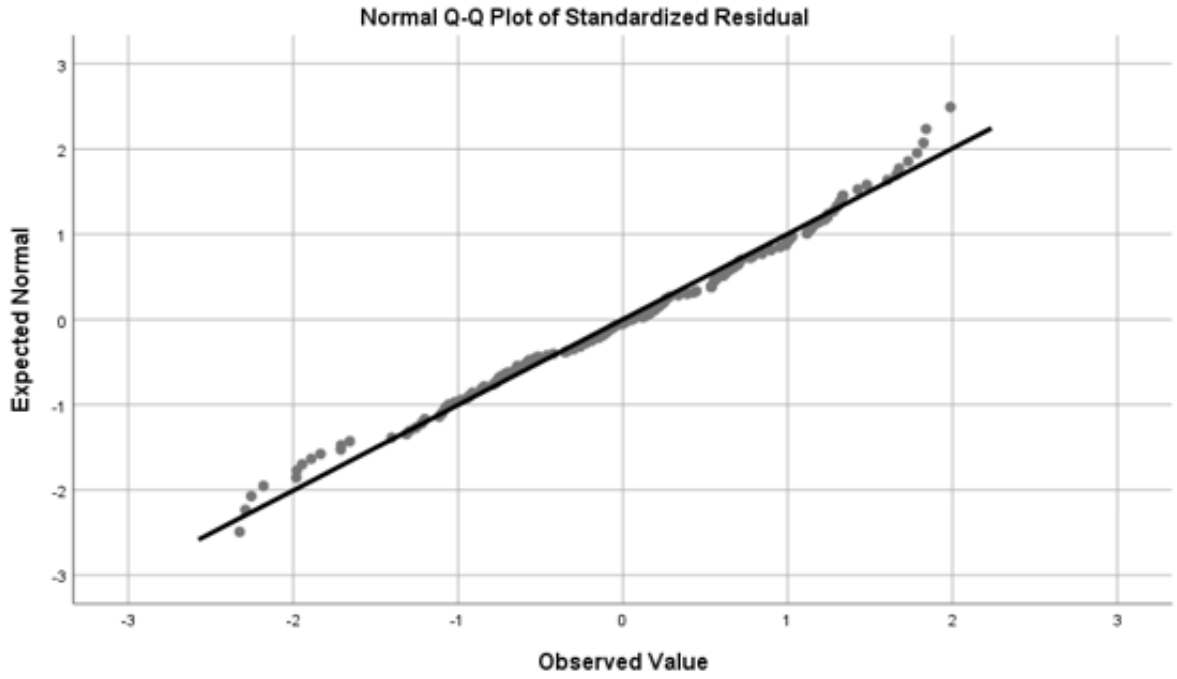
Durbin Watson of 1.827 should that there is independence of the variables – there is no serial correlation.

Test for Normality Overall

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual	.070	156	.059	.984	156	.061

a. Lilliefors Significance Correction



Normal Q-Q. Used to examine whether the residuals are normally distributed. The distribution for the variable was found to be good as the residual points follow the straight dashed line.

APPENDIX 5: ETHICAL CLEARANCE

Gordon Institute of Business Science
University of Pretoria

19 July 2018

Rose Enver

Dear Enver

Please be advised that your application for Ethical Clearance has been approved.

You are therefore allowed to continue collecting your data.

Please note that approval is granted based on the methodology and research instruments provided in the application. If there is any deviation change or addition to the research method or tools, a supplementary application for approval must be obtained

We wish you everything of the best for the rest of the project.

Kind Regards

GIBS MBA Research Ethical Clearance Committee