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A contextual study of the relationships between entrepreneurial orientation dimensions and employment growth of small businesses

by

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ABSTRACT

A contextual study of the relationships between entrepreneurial orientation dimensions and employment growth of small businesses

Supervisors: Dr Chukuakadibia Eresia-Eke and Dr Menisha Moos
Department: Business Management
Degree: PhD in Entrepreneurship

The business environment in South Africa (SA) is characterised by limited resources, high uncertainty and stiff competition which have contributed to the high level of unemployment in the country. The economy is generating few jobs. Across different spheres of society – academia, industry and government – emphasis is being placed on entrepreneurship and small businesses as drivers of economic growth and employment creation. Scholars of entrepreneurship have used entrepreneurial orientation (EO) widely to delineate firm-level entrepreneurial behaviour and intensity using the uni-dimensional and multi-dimensional conceptualisation. EO as a consolidated construct is confirmed to have a relationship with the performance of businesses. However, business performance does not translate into business growth nor is it the same as employment growth. It appears that the association between EO and employment growth has attracted less attention in research despite its importance to theory and practice. In addition, studies on the antecedents of EO – such as its relationship with task environment variables and its consequences on employment growth – are limited in SA.

Hence this study examines the nexus between the environment, the sub-dimensions of EO and employment growth. It hypothesises relationships between two environmental variables: dynamism and hostility and five dimensions of EO: innovativeness, pro-activeness, risk-taking, competitive aggressiveness and autonomy. Similarly, it tests the relationships between these dimensions and employment growth; directly and as moderated by environmental dynamism and hostility. To a greater extent, it considers established SMMEs that have transited

through the survival phase into the growth phase of business operation. Using a survey method, data is collected from small business across SA from which 1031 SMMEs were considered for statistical analysis and this entailed the use of descriptive techniques that measures central tendencies and inferential techniques such as correlation analysis factor analysis, regression analysis and partial-least-square structural equation modelling and graphical illustration with use of pie charts and bar charts.

The sample consists of service and non-service sector businesses but professional and consulting services constitute close to a third of the sample. Findings from this study reveal that SMMEs in SA display a moderate to high EO and only four of its dimensions (proactive-innovation, risk-taking, competitive aggressiveness and autonomy) were visible statistically. Statistically significant relationships were found between environmental hostility and dynamism and the dimensions of EO for the entire sample. The relationships between the dimensions of EO and employment growth were statistically insignificant except for medium-sized businesses (MSBs) in which proactive-innovation and competitive aggressiveness indicated a statistically significant negative relationship with employment growth.

In conclusion, this study contributes to the understanding of EO as a construct given that it considers the environment as its antecedent. It lays emphasis on the multi-variate relationships between environmental hostility, environmental dynamism, and each of the dimensions of EO. From a methodological perspective, this study employs an objective approach to measuring employment growth using Gibrat's law. It demystifies the complex relationships between the business environment and the dimensions of EO and concomitantly sheds light on employment growth. It amplifies the role of the environment in small business development and identifies the dimensions of EO that could deemed relevant to employment generation. Finally, it advocates the need for context-specific entrepreneurial strategies to develop components of the SMME cohort and effective promotion of job creation.

Key words: Environmental dynamism, Environmental hostility, Entrepreneurial orientation, Employment growth, SMMEs, South Africa.

In memory of my late father,

Reverend Thomas Bamidele Olusegun Ijagbulu

(1949 - 1992)

Daddy, I am reminded of your sense of calling, duty and the courage you displayed in pursuing what you believed. The same attributes, I have emulated and by the grace of God, have come this far.

I pray that the coming generation will follow suit.

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ABBREVIATIONS, ACRONYMS AND GLOSSARY

AGFI	Adjusted Goodness-of-Fit Index
AMOS	Analysis of Moment Structures
AN	Autonomy
ASGISA	Accelerated and Shared Growth Initiative for South Africa
AVE	Average Variance (extracted)
BEE	Black Economic Empowerment
BER	Bureau for Economic Research (based in Stellenbosch, Western Cape)
CA	Competitive Aggressiveness
CE	Corporate Entrepreneurship
CFA	Confirmatory Factor Analysis
CIE	Centre for Innovation and Entrepreneurship
CIPC	Companies and Intellectual Property Commission
CR	Composite Reliability
DPLG	Department of Provincial and Local Government
DTF	Distance to Frontier [score]
dti	Department of Trade and Industry
DV(s)	Dependent Variable(s)
E/SB policy	Entrepreneurship/Small Business Policy
ED	Environmental Dynamism
EEA	Entrepreneurial Employee Activity
EFA	Exploratory Factor Analysis
EG	Employment Growth
EH	Environmental Hostility
EM	Entrepreneurial Management

EO	Entrepreneurial Orientation
EP	Entrepreneurial Posture
EU	European Union
FA	Factor Analysis
FNB	First National Bank
GDP	Gross Domestic Product
GEM	Global Entrepreneurship Monitor
GERA	Global Entrepreneurship Research Association
GoF	Goodness-of-Fit (test)
GWM&ES	Government-wide Monitoring and Evaluation System
HSRC	Human Sciences Research Council
HTMT	Heterotrait-Monotrait (approach)
ICE	International Corporate Entrepreneurship
ILO	International Labour Organisation
IMF	International Monetary Fund
INNOV	Innovativeness
ISEDS	Integrated Small Enterprise Development Strategy
ISPESE	Integrated Strategy on the Promotion of Entrepreneurship and Small Enterprises
IV(s)	Independent Variable(s)
KMO	Kaiser-Meyer-Olkin (test / measure)
LDCs	Less Developed Countries
LED	Local Economic Development
M&E	Monitoring and Evaluation
MSME(s)	Micro-, Small- and Medium- Enterprise(s)
MV(s)	Moderating Variable(s)
NDP	National Development Plan
NFI	Normed Fit Index

NPC	National Planning Commission
NYDA	National Youth Development Agency
OECD	Organisation for Economic Co-operation and Development
OLC	Organisational Learning Capability
PA	Pro-activeness
PAF	Principal Axis Factor (extraction technique)
PCA	Principal Component Analysis
PLS	Partial Lease Square
PLS-SEM	Partial Least Square-Structural Equation Modelling
PNFI	Parsimony Normed Fit Index
PPM	Pearson Product Moment
R&D	Research and Development
RCM	Rotated Component Matrix
RMS	Root Mean Square
RMSR	Root Mean Square Residual
RNI	Relative Non-centrality Index
RoA	Return(s) on Assets
RSA	Republic of South Africa
RT	Risk-taking
SA	South Africa(n)
SAMAF	South African Micro-Finance Apex Fund
SEDA	Small Enterprise Development Agency
SEFA	Small Enterprise Finance Agency
SEM	Structural Equation Modelling
SME(s)	Small- and Medium- Enterprise(s)
SMEA	Small and Medium Enterprise Administration
SMME(s)	Small- Medium- and Micro- Enterprise(s)
SPSS	Statistical Package for Social Sciences

SRMSR	Standardised Root Mean Square Residual
StatsSA	Statistics South Africa
TEA	Total Early-stage entrepreneurial Activity
TGA	Total Gross Asset (value)
TLI	Tucker-Lewis Index
UK	United Kingdom (of Great Britain)
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
US	United States
USA	United States of America
USD	ISO code for United States Dollar(s)
VAT	Value-Added Tax
WEF	World Economic Forum
X^2	Chi-square statistic
ZAR	ISO currency code for South African Rand(s)

CHAPTER 1
INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 BACKGROUND

The impact of a firm's external environment on its growth performance has been the subject of much research attention (Volcheck, Jantunen & Saarenketo, 2013:320; Chen, Hou, Li, Wilson & Wu, 2014:132; Lajqi & Krasniqi, 2017:385). Businesses are dependent on the environment in which they operate for resources, information and opportunities that can be explored and exploited toward realising their goals and objectives (Covin, Slevin & Heeley, 2000:175; Volcheck *et al.,* 2013:320; Halkos & Managi, 2017:649). Although these scholars have debated the influence of the external environment on a firm's performance, empirical research on this relationship has not been conclusive (Rosenbusch, Rauch & Bausch, 2013:2).

Nichter and Goldmark (2009:1453), Shirokova, Bogatyreva, Beliaeva and Puffer (2016:703), and Bogatyreva, Beliaeva, Shirokova and Puffer (2017) argue that the environment may not affect the performance outcomes of business directly but stimulates a firm's strategic behaviour such as its entrepreneurial orientation (EO) which will consequently influence its performance or growth. Besides providing opportunities to be exploited by the firm, the external environment is a source of competition which can facilitate innovation and growth of the business (Casillas, Moreno & Barbero, 2010:32) but it can also limit exploitable opportunities available to the business and threaten its survival. Thus, the relationship between the external environment and firm performance is complex and the means by which firms utilise opportunities provided by the external environment in order to enhance business growth requires clarity (Rauch, Wiklund, Lumpkin & Frese, 2009:761). Given this complexity, the EO of a firm can be considered a critical factor since it can influence strategic decision making and overall firm competitiveness (Casillas *et al.,* 2010:27; Shirokova *et al.,* 2016:703).

The phenomenon of firm growth as an indicator of performance has remained relevant from both a practical and theoretical perspective. Firstly, due to the socio-economic consequences of business growth as a prerequisite to job creation (Brown, Davidsson & Wiklund, 2001:953; Delmar, Davidsson & Gartner, 2003:189; Moreno & Casillas, 2008:507) and, secondly, because research attention has been directed increasingly toward business performance as less is known about business growth (Birch, Haggerty & Parsons, 1994:16; Littunen & Tohmo, 2003:187). In fact, much less is known about employment as an exclusive measure of growth as researchers often aggregate measures of growth (Moreno & Casillas, 2008:516; Wiklund, Patzelt & Shepherd, 2009:359; Altinay, Madanoglu, De Vita, Arasli & Ekinci, 2016:877).

Since entrepreneurial behaviour has been associated with business growth (Covin & Slevin, 1991:7; Moruku, 2013:41) and is considered a logical consequence of particular firm characteristics, attributes that convey its entrepreneurial disposition and define its orientation (Miller,1983:771; Covin & Slevin, 199:11; Venkataraman, 1989:948; Lumpkin & Dess, 1996:142; Wiklund & Shepherd, 2005:71; Rauch, et al., 2009:764), can also be associated with a firm's business growth (Gurbuz & Ayokol, 2009:321; Moreno & Casillas, 2010:265). In this regard, EO has been considered an important contributor to firm performance (Lumpkin & Dess, 1996:135, Wiklund & Shepherd, 2005:71) and has been associated with growth in employment (Madsen, 2007:185; Gurbuz & Aykol, 2009:330; Janssen, 2009:311).

EO is a behavioral construct at firm level that explains the processes, practices and decisions that lead to new venture entry in the quest of exploiting opportunities in the market place or shaping its environment (Alarape, 2013:556) and it would seem that the higher a firm's EO, the higher its chances for achieving growth (Rigtering, Kraus, Eggers & Jensen, 2014:275).

Small Medium and Micro Enterprises (SMMEs) in general and those with a growth orientation in particular are viewed as important sources of job creation and revenue generation in market economies (Valliere, 2006:144; Tustin, 2015:83). According to Nieuwenhuizen (2014:5), SMMEs form 97.5 % of all businesses in South Africa, generate 35 % of gross domestic product (GDP), contribute 43 % of the total value of salaries and wages paid in South Africa and employ 55 % of all formal private-

sector employees. Many reasons have been adduced to the general underperformance and low employment growth of SMMEs in South Africa, some of which direct attention to the state of the business environment and the disenabling conditions within which many SMMEs operate. Moreover, since 1994 there has been increasing emphasis on the need for a supportive and co-operative business environment that will facilitate entrepreneurial development. However, research focused on the nexus between the business environment, EO and employment growth of SMMEs in South Africa is lacking.

Although the unidimensional perspective to EO has been explored in research (Rauch *et al.,* 2009:767), the dimensions which were initially aggregated together in earlier theoretical models (innovativeness, risk-taking and pro-activeness) and the later-introduced dimensions of competitive aggressiveness and autonomy may possess unique relationships with other variables (Miller, 2011:880). Moreover, the scholarly debate on which perspective is better in conceptualising EO is still ongoing (Covin & Wales, 2012:698; Anderson *et al.,* 2015:1580) and so the need exists to investigate the sub dimensions of EO as independent constructs (Lumpkin & Dess, 1996:156; Kreiser, & Davis, 2010:42; Miller, 2011:880). In addition, little is known about the antecedents of EO. Consequently, this study models the relationships between environmental dynamism (ED) and environmental hostility (EH), individual dimensions of EO and employment growth.

Within the context of SMMEs in South Africa this study employs a quantitative approach to confirm the existence, intensity and dimensionality of EO. It seeks to elucidate the relationships between environmental hostility (EH), environmental dynamism (ED) and the individual dimensions of EO. It investigates the relationship between these dimensions and employment growth (EG) directly and as contingent on environmental hostility (EH) and environmental dynamism (ED). In this study, EG is indicated by the annual growth rate in employment using Gibrat's law (Gibrat, 1931).

1.2 PROBLEM STATEMENT

The current business environment in South Africa (SA) is typified by limited resources, high uncertainty and stiff competition. This has led to a chronic level of

unemployment which is currently [in 2018] estimated at 26.7 % (Herrington, Kew & Mwanga, 2017:6; Trading Economics, 2018; Statistics South Africa (StatsSA), 2018); the highest since 2003. Consequently, more than one person in every four of SA's labour force is unemployed and the economy is not creating enough jobs. Moreover, emphasis has been laid on the business environmental conditions in which firms operate and their importance toward entrepreneurship development and small business growth in South Africa (Nieman & Nieuwenhuzien, 2014:12; Bureau for Economic Research (BER), 2016:5). In fact, SMMEs have been the object of attention in relation to economic growth and employment creation in SA since the enactment of the National Small Business Act of 1996 (as amended in 2003 and 2004) (Tustin, 2015:79) and they continue to draw the interests of researchers and policy makers along with issues relating to entrepreneurship (Small Enterprise Finance Agency, 2016:5).

With regard to recent employment estimates, formal Small and Medium Enterprises[1] (SMEs) contribute up to 60 % of total employment and four out of five new positions are generated by SMEs in the formal sectors of emerging economies (World Bank, 2018). Evaluating the contribution of the small business sector to the South African economy has been difficult as researchers have come up with different findings. The Bureau for Economic Research (BER, 2016:1) states that SMMEs in South Africa contribute 14 % to total employment and research conducted by the Human Sciences Research Council (HSRC) reveals that 70 % of all workers in South Africa are employed by companies having fewer than 50 workers, while 45% of all employed people work in firms with fewer than 10 employees (Jones, 2013). Moreover, according to the Small Enterprise Development Agency (SEDA) (2016) SMMEs contribute between 52 and 57 % of South Africa's GDP and 60 % of employment (Groepe, 2015:5). Independent research by FinMark Trust (2015:4) reveals that SMEs make up 91 % of formal business entities, provide employment to about 60 % of the labour force and contribute roughly 57 % of GDP. Therefore, the relevance of small businesses to job creation cannot be over emphasised.

[1] **Note**: In this study, the terms "small enterprise(s)" and "small business(es)" are considered interchangeable.

South Africa's economic roadmap, the National Development Plan (NDP), envisages growth (particularly employment growth) will be powered by small and expanding businesses. Specifically, the NDP predicts that about 90 % of jobs will be created in small and expanding companies by 2030 (National Planning Commission (NPC), 2011:3). In fact, the South African government has set ambitious unemployment reduction targets of reducing the rate from 25 % to 14 % by 2020 and to 6 % by 2030 (South African Institute of Chartered Accountants, 2015:4). These prospects may be linked to SMMEs' ability to grow successfully.

In spite of this, analysing employment data trends published by Statistics South Africa (StatsSA, 2017a, 2017b, 2017c) namely, the unemployment rate, employment to population ratio and labour force participation rate, it is evident that there has been no improvement in the past year. In fact, the market share of jobs created in informal small business is deteriorating. A key concern emerging from the small business employment ability analysis is the seeming stagnation of established small businesses (Tustin 2015:83). Existing enterprises seem to have a low propensity to create additional employment, leading to an expanding pool of individual self-employed or employer survivalist micro-enterprises. This suggests that there is little progression from survivalist micro-enterprise to more formal small enterprise. It also seems highly unlikely that small businesses are progressing to medium-sized enterprises.

From a policy perspective, these conclusions suggest that, while broad entrepreneurship programmes are important, the key issue is less about entrepreneurial opportunities and more about entrepreneurial capacity and intensity. Furthermore, the fact that South Africa has consistently been ranked at the bottom end of opportunity entrepreneurship and new firm activity (Herrington, Kew & GERA, 2017:92), also paints a bleak picture for sustainable business and future growth. Therefore, in ensuring the sustainability of SMMEs in South Africa enquiries such as this study are required to address pertinent issues.

Although entrepreneurship and small business development remains a policy agenda at all levels of government in South Africa there has been little improvement in recent years as revealed by the Global Entrepreneurship Monitor (GEM) 2016/17 Global Report. The low rates of entrepreneurial intention, total early-stage

entrepreneurial activity (TEA) and businesses ownership rate are causes for concern (Herrington, Kew & Mwang, 2017:92). Furthermore, there is the evidence provided by the rate of business discontinuance which can be considered as an indicator of the sustainability of entrepreneurship in an economy. According to Herrington *et al.* (2017:28), South Africa's business discontinuance to TEA ratio is 2:3, indicating that for every person exiting a business in 2016, 1.5 were engaged in early-stage entrepreneurial activity. This is a fairly high proportion of discontinuances to start-ups. It is stressed that the discontinuance rate among South African businesses remains much higher than the established business rate which implies that the country is regressing in terms of entrepreneurial activity.

It is noteworthy that this alarming failure rate is predominant amongst SMMEs which constitute up to 98 % of all businesses within the economy (Makina, Fanta, Mutsonziwa, Khumalo & Maposa, 2015:11). In terms of international comparative data South Africa has one of the world's lowest survival rates of SMME start-ups, with an estimate that as many as 80 % of South Africa's SMMEs fail within their first year of existence (Masutha & Rogerson, 2014:143; Tustin, 2015:84). This is evidence of the challenging business environment in which SMMEs in South Africa operate and is a constraint on entrepreneurship development and possibly employment growth at firm level.

All of the above problems create a collage that inevitably encumber employment and economic growth. In order for a country like South Africa to remain on a growth trajectory these challenges as elucidated in this section are worthy of some attention. More specifically, issues relating to the business environment, entrepreneurial orientation and employment generation have to remain on the front burner of academic and societal discourse. This essentially is the basis from which this study derives its impetus.

1.3 PURPOSE OF THE STUDY

Although a cumulative body of knowledge exists regarding the growth impact of EO (for example, Madsen, 2007; Moreno & Casillas, 2008; Lotz & van der Merwe, 2013) not enough is known about its antecedents which limits the understanding of the construct. Accordingly, it is unclear what factors precipitate entrepreneurial

behaviour and to what extent. Furthermore, it is noticeable that in comparison to business performance, the association between EO and growth seems to require more research attention and in particular employment as a singular measure of business growth. Moreover, the relationships between the environment and the dimensions of EO are yet to be fully explored. Therefore, it becomes necessary to present an empirically validated model that considers the environment as an antecedent to EO and its association to employment growth both in its direct and moderated form.

This study takes the assessment of employment growth further than previous studies (Ferrira & Azevedo, 2008:84; Gurbuz & Ayakol, 2009:328; Janssen, 2009:319; Nene & van Zyl, 2017:170) that have not attended to the period through which growth takes place, hence, it uses Gibrat's (1931) law of proportionate effect to determine the annual growth rate of firm.

Within the context of South African SMMEs, this study seeks to elucidate on the relationships between the environment and the individual dimensions of EO. It intends to shed light on the relationship between these dimensions – innovativeness, pro-activeness, risk-taking, competitive aggressiveness and autonomy and employment growth – both directly and as contingent on the environment in terms of its hostility and dynamism. On that account, it has a primary research objective and secondary research objectives.

1.3.1 Primary Research Objective

The primary objective of this research is:

> To examine the relationships between the business environment [environmental hostility (EH) and environmental dynamism (ED)], the dimensions of entrepreneurial orientation (EO) and employment growth (EG) amongst SMMEs in South Africa.

1.3.2 Secondary Objectives

The secondary objectives are to examine the nexus of relationships between:

- the environment, small business **innovativeness** and employment growth
- the environment, small business **pro-activeness** and employment growth
- the environment, small business **risk-taking** and employment growth
- the environment, small business **competitive aggressiveness** and employment growth
- the environment, small business **autonomy** and employment growth.

1.4 INTRODUCTION OF KEY TERMS IN THE STUDY

The understanding of a few key terms is considered necessary in this study. They are constructs involved in the conceptual model; entrepreneurial orientation (EO), environmental hostility (EH), environmental dynamism (ED), employment growth (EG) as well as the contingency theory that provides the relevant platform and contributes to the thrust of the study.

1.4.1 An Introduction to Entrepreneurial Orientation

EO has its roots in the strategy literature and it represents the process, policies and practices that provide the basis for entrepreneurial decisions and actions (Rauch *et al.,* 2009:763). Based on Miller's (1983:771) seminal definition of an entrepreneurial firm as one that engages in product market innovation, undertakes somewhat risky ventures and is first to come up with pro-active innovation, three dimensions of EO were initially identified: namely, innovativeness, risk-taking and pro-activeness. Covin and Slevin (1989:76) further refined Miller's definition stating that the EO of a firm is demonstrated by the extent to which the top managers are inclined to take business-related risk (risk-taking dimension), to favour change and innovation to obtain a competitive advantage for their business (innovative dimension) and to foresee and take market opportunities (pro-active dimension).

While a number of authors (Zahra, Jennings & Kuratko, 1999:50; Morris, Kuratko & Covin 2008:54) have adopted a similar definition, many others have made subtle changes that altered the meaning of the construct (George & Marino, 2011:992). For example, Dess and Lumpkin (2005:147) define EO as the strategy-making practices that businesses use to identify and launch corporate ventures. Apart from innovativeness, risk-taking and pro-activeness, two other dimensions were introduced by Lumpkin and Dess (1996:139-140), namely, competitive aggressiveness and autonomy. They argue that EO includes a propensity to act autonomously and a tendency to be aggressive toward competitors. Lumpkin and Dess (1996:148) explicate competitive aggressiveness as a firm's propensity to directly and intensely challenge its competitors to achieve or improve existing positions. It is characterised by responsiveness in terms of confrontation or reactive action as it responds to trends and demands existing in the market place. Lumpkin, Cogliser and Schenider (2009:47), define "autonomy" as an independent spirit and freedom of action necessary to advance new venture development and drawing force for value creation.

1.4.2 An Introduction to Environmental Hostility

Hostile environments are characterised by precarious industry settings, intense competition, harsh, overwhelming business climates, and the relative lack of exploitable opportunities (Covin & Slevin, 1989:75). Hostility indicates an unfavourable business climate, such as intense competition for resources or market opportunities. It arises from the existence of too many competitors, unfavourable supply conditions and strict regulation (Urban, 2010:2). Hostility in the environment is evidenced by the level of a general lack of opportunities and resources available to firms from the environment and competition for these resources (for example, severe regulatory restrictions, shortness of labour or raw materials, decreasing markets) that influence the extent to which the environment can hinder sustained organisational stability and growth (Bratnicka, 2014:61). Environmental hostility plays a role in small firm viability and survival (Covin & Slevin, 1989:75; Urban 2012:7).

1.4.3 An Introduction to Environmental Dynamism

Dess and Beard (1984:56) presented ED as one of the task environment variables and defines it as the degree of change in an organisation, it consists of technological turbulence, frequency, and the unpredictability of market-related volatility. ED results from the entry or exit of competitors, changes in customer needs, and shifts in technological conditions (Urban, 2010:2). It includes the modes of intensity of competition. Therefore; it increases the general level of uncertainty for organisational members (Bratnicka, 2014:61). Wallace, Little, Hill and Ridge (2010:585) elaborate on ED, stressing that stable environments are characterised by minimal changes in customer preferences, technologies and competitive dynamics, whereas highly dynamic industries are characterised by a higher rate of change and instability. These changes create opportunities and threats for new ventures and compel their managers to act by building and leveraging technological resources.

1.4.4 An Introduction to Employment Growth

The measurement of the performance and growth of small businesses is a complex area, with different approaches proposed in the literature. Dobbs and Hamilton (2007:297) identify six approaches adopted by previous studies to investigate the growth of small firms, namely: stochastic, descriptive, evolutionary, resource-based, learning, and deterministic approaches This study follows the deterministic approach to small-firm growth which argues that variations in growth can be explained by different variables related to people, the firm, and the business environment. Studies exploring these approaches contribute to the understanding of small business growth through explaining growth promoted by managerial strategies (employee recruitment and development, product and market development, internationalisation and collaboration), characteristics of the entrepreneur, environmental/industry-specific factors and characteristics of the firm (Reijonen, Laukkanen, Komppula & Tuominen, 2012:699).

Although other measures of growth, such as: sales, assets and market share have been considered in EO studies (Ferreira & Azevedo, 2008; Gurbuz & Ayokol; 2009; Jansen 2009; Altinay, Madanogulu, De Vita, Arasli & Ekinici, 2016; Martins, 2016),

this study is concerned with the change in the number of employees of a firm over a period of time. This study makes use of Gibrat's (1931) law of proportionate effect which is consistent with Dobbs and Hamilton's (2007:297) stochastic approach to measuring firm growth. Employment growth is indicated by the annual growth rate in the number of employees. This measure of growth is obtained considering the number of employees at start up, at the time of measurement and the number of years the business has been in operation.

1.4.5 An Introduction to the Dimensions of Entrepreneurial Orientation

Although being the earlier theorists, Miller (1983) – along with Covin and Slevin (1989) – presents EO as consisting of three dimensions, researchers have defined the domain of EO as containing fewer or more dimensions (George & Marino, 2011:992; Anderson, Kreiser, Kuratko, Hornsby & Eshima, 2015:1579). Two other dimensions: competitive aggressiveness and autonomy have been introduced by Lumpkin and Dess (1996:139). These authors argue that EO includes a propensity to act autonomously and a tendency to be aggressive towards competitors. Wang (2008:637), in contrast, adopted four dimensions; pro-activeness, competitive aggressiveness, risk-taking and innovativeness in his study. Lumpkin and Dess (2001:429) examine only pro-activeness and competitive aggressiveness in testing their association to the business environment and industry life-cycle stage.

Furthermore, in approaching the study of EO, the issue of whether it should be considered as a uni-dimensional or multi-dimensional construct has been the subject of scholarly debate. Miller (1983) and Covin and Slevin (1989) are the proponents of a uni-dimensional conceptualisation and, in this perspective, the latent construct is understood to exist only to the extent that risk-taking, innovativeness, and pro-activeness are concurrently manifested by the firm. In this view, exhibiting one or two of the dimensions would be insufficient to label the firm as entrepreneurial. This is because, in a statistical sense, EO is the common or shared variance among risk-taking, innovativeness, and pro-activeness (Covin & Lumpkin, 2011:862).

The multi-dimensional view to EO presents the latent construct as a set of independent dimensions. As conceptualised by Lumpkin and Dess (1996), EO is a

super-ordinate construct with the dimensions of risk-taking, innovativeness, pro-activeness, competitive aggressiveness, and autonomy themselves being constructs that function as specific manifestations of EO. Consistent with this conceptualisation, EO exists in practice as either a set of independent behavioural scores (ranging from low to high) across these five dimensions or as a collective profile or “gestalt” formed by these five dimensions (Covin & Lumpkin, 2011:863).

The conceptualisation of EO has become controversial and is being widely debated such that there is yet no consensus on matters such as an appropriate definition of the construct, its domain or dimensionality (Covin & Lumpkin, 2011:856; George & Marino, 2011:992). Its dimensionality has been based largely on the samples available to respective studies. This study will retain the view that EO consists of five independent dimensions: namely, innovativeness, risk-taking, pro-activeness, competitive aggressiveness and autonomy and part of its objective is to interrogate how the dimensions feature amongst SMMEs in South Africa.

1.4.6 An Introduction to Contingency Theory

The idiosyncratic nature of firm growth is addressed in the evolutionary models which stem from the work of Aldrich (1999). In this approach, the growth of a firm over a period of time is contingent on the interaction of a number of internal and external forces. Hence, the nature and timing of a firm’s growth will be a result of its own unique circumstances (Dobbs & Hamilton, 2007:298). The contingency theory has been widely applied in strategic management studies (Liberman & Montgomery, 1988:41; Dreyer, 2006:145). It assumes that strategies respond to environmental contingencies to maintain performance. It stresses that effective selection of appropriate strategies is imperative in the face of environmental challenges to optimise performance. Contingency theory asserts that the effect of one variable on another can be affected by a third variable (Donaldson, 2001). The theory recognises the existence of three types of variables: contingency variables, response variables, and performance variables. Environmental situations are often represented by contingency variables. Response variables are often organisational initiatives or reactions that respond to environmental contingencies. Performance variables are dependent variables which represent specific effectiveness and evaluate the fit between contingency variables and response variables (Chang,

2015:8). Therefore, the fit that is observed between a responsive strategy and environmental contingencies is to formulate an appropriate strategy that ensures better performance.

In this study, the contingency variables will be captured by the dynamism and hostility of the business environment. Response variables will be the dimensions of EO and the performance variables will be the dimensions of employment growth. In line with contingency theory, the fit between environmental conditions, EO and employment growth is the crux of the study.

1.5 THEORETICAL FRAMEWORK

In this section, extant literature on the key terms of the study is discussed briefly in an attempt to establish the state of current discourse linked to the study's focus.

1.5.1 The Task Environment and Entrepreneurial Orientation

Since this study entails a performance outcome of the environment, it considers the task environment which addresses how firms interact with customers, competitors, suppliers and other stakeholders. The task environment affects decisions, actions, and the performance of organisations. It arguably offers a more relevant perspective than the more aggregated concept of industry structure as an antecedent of EO and firm performance in general (Covin & Slevin, 1989:77; Miller, 1983:776). Environmental hostility and dynamism are the two task environment variables considered in this study.

1.5.1.1 Environment Hostility and Entrepreneurial Orientation

A hostile environment is an unfavourable condition that implies competition for scarce resources and opportunities (Covin & Slevin, 1989:75; Frese, Brantjes & Hoorn, 2002:264). Hostility is considered as being a characteristic of industrial saturation, which has been suggested as a key constraint to corporate performance (Datta & Narayanan, 1989:478). From a conceptual point of view, hostility entails more than a mere concentration measure, it includes competition, political and economic constraints (Miller, 1987:55), customer loyalty challenges and the consequences of strategic decisions (Covin, Slevin, & Heeley, 2000:189). Intense

competition for resources and opportunities, as well as other constraints, decrease profit margins and limited strategic options are associated with a hostile environment (Miller & Friesen, 1983:221). Hence, a hostile environment requires strategic discipline as wrong strategic decisions could threaten the survival of a firm.

Since resources are limited, firms operating in hostile environments face difficulties in acquiring financial and human resources and this directly impacts their ability to compete (Covin & Slevin, 1989:79; Volcheck, Jantumen & Saarenketo, 2013:320; Chen, Hou, Li, Wilson & Wu, 2014:132). For example, a firm that engages in a product innovation strategy under the condition of intense, price-based competition may fail because the innovation does not meet demand and the firm suffers from the unwillingness of customers to value innovations with a price premium (Zahra & Bogner, 2000:135). Thus, firms in hostile environments are expected to exhibit lower EO and, in turn, inferior performance.

With respect to the task environment as the context for adopting an EO, empirical studies conducted by Covin and Slevin (1989:77) found that EO is associated with performance among small firms operating in hostile environments but not among those operating in benign environments. Lumpkin and Dess (1996:168) concur that the performance implications of EO are context specific, stating that the relationship between EO and performance depends on the characteristics of the environment. In a more recent study, Bratnicka (2014:63) hypothesised that the effect of strategic entrepreneurship weakens firm performance as environmental hostility increases. It was found that hostility in Polish SMEs led to a more intensive strategy; a finding which underscores Lumpkin and Dess' (2001:437) supposition that EO is most effective in a hostile environment. Therefore, the proposition that EO is irrelevant to a hostile environment is inconclusive and subject to further enquiry.

1.5.1.2 Environment Dynamism and Entrepreneurial Orientation

Dynamic environments are associated with high unpredictability of customers and competitors and high rates of changes in market trends and industry innovation (Dess & Beard, 1984:56; Urban, 2010:2; Walker, Berry & Avellaneda, 2015:668). Environmental dynamism captures both uncertainty and unpredictability of future market changes. It can occur in many ways and can manifest as changes in

customer needs; shifts in the behaviour of competitors and suppliers, or as technological discontinuities. Thus, uncertainty arises from a lack of information about future events and their consequences, as well as responses to them. These rapid changes and the unpredictability of future events provide ample opportunities for firms. For example, shifts in demand allow firms to exploit new customer needs, and technological discontinuities offer opportunities along a new technological trajectory. At the same time, in dynamic environments where technology, demand, and competitor behaviour change quickly, existing opportunities and resources can rapidly become redundant.

Although dynamic environments may create difficulties for strategic decision making, firms that explore and exploit opportunities in such environments can outperform their rivals (Rosenbusch *et al.,* 2013:648). Therefore, an entrepreneurial orientation will be feasible in such an environment. An environment where demand constantly shifts and opportunities become abundant, performance is expected to be higher for those firms with EO in a quest for new opportunities. This is because the firms with EO will have a better fit between their strategic orientation and the environment (Wiklund & Shepherd, 2005:77). The rapid rate of change and difficulty in predicting future events require firms to be pro-active. Pro-activeness helps firms to explore and exploit new resources that are required for successful venturing into new markets (Lumpkin & Dess, 2001:441). In a dynamic environment, resource allocations towards innovations triggered by EO enable firms to exploit opportunities in a similar way as they do in non-hostile environments. This could possibly be why Zhu and Matsuno (2016:22) contend that EO has a further advantage in a dynamic environment.

Zhu and Matsuno (2016:22) argue that the pro-active introduction of new products and services makes firms less vulnerable to the danger that their existing knowledge and competencies will become obsolete. Firms with a high degree of EO will continually improve, or even alter, their resource base. This prevents them from creating rigidities within the firm, a dangerous condition for firms operating in dynamic environments. Firms in dynamic environments can be viable in the long run only if they manage to retain a highly flexible resource base. Thus, a dynamic

environment could trigger the implementation of an EO that embodies a focus on resource flexibility.

Against this backdrop, EO is a valid strategic posture in highly dynamic environments, relative to stable environments (with low dynamism) which may not require complex and risky explorative strategies.

1.5.2 Entrepreneurial Orientation Dimensions and Employment Growth

In general, literature on the relationship between EO and growth proposes that both variables are positively related, in agreement with the widely held idea that a higher EO has influence on a firm's increased growth (Covin & Slevin, 1991:7; Lumpkin & Dess, 1996:135; Wiklund & Shepherd, 2005:78; Moreno & Casillas, 2008:507). Employment growth – as a measure of firm growth – has attracted attention from researchers for a number of reasons. Primarily, it serves as an indicator of entrepreneurial success and represents a measure of the firm's economic contribution to society (Davidsson, Delmar & Wiklund, 2006) since jobs provide incomes for individuals and households. Consequently, employment growth has been useful to economists and sociologists, and has been considered ahead of other growth measures in small business policy. However, businesses themselves prefer to measure their success in terms of sales growth (Davidsson & Wiklund, 2006:53). Nevertheless, the conceptual perspective that the dimensions comprising EO are independent of each other (Lumpkin & Dess, 1996:157, Lumpkin & Dess, 2001:446) calls for further, independent reflection about the relationship between each of the dimensions constituting EO and employment growth.

1.5.2.1 Innovativeness and Employment Growth

Of the original three dimensions that constitute the EO construct, innovativeness is the one that meets with the greatest degree of consensus regarding its positive relationship with firm growth (Rauch *et al.,* 2009:779). Thus, Moreno and Casillas (2008:507) state that strategy of innovation in new products and new processes has a positive and significant influence on a firm's growth rate. An innovation strategy is proven to be one of the most typical pathways to growth in employment that it enables new business opportunities to be explored and the company's competitive

edge to be improved. Lumpkin and Dess (1996:142) state that innovation processes are characterised by existing market structures being disrupted by the introduction of new goods or services that shifted resources away from the existing firms and caused new firms to grow. Schumpeter (1934), in his seminal work, emphasised the role of innovativeness in the entrepreneurial process in terms of this 'creative destruction' of market structures which fosters growth. Also, studies have established a close relationship between high-growth companies and strategic innovation.

1.5.2.2 Risk-taking and Employment Growth

Unlike innovativeness, the relationship between risk-taking and employment growth is less clear. This can be deduced from Rauch *et al.* (2009:779). From their review of 37 empirical studies, they identify a less-intense relationship between risk-taking and employment genearation. On the one hand, the ability to assume risk enables a company to take on investment projects with less foreseeable results and such projects do not necessarily have to provide a substantial improvement in profits. On the other hand, if management's organisational capabilities are held constant then, in the face of the occurrence of a risk affecting all firms, it would seem logical that those firms capable of taking on higher-risk projects will tend to reap a larger reward in the form of increased growth.

1.5.2.3 Pro-activeness and Employment Growth

Rauch *et al.* (2009) found that, apart from innovativeness, pro-activeness is the other dimension of EO that tends to reflect a positive relationship with business growth. "Pro-activeness" refers to the advantages derived from being the first mover (Lumpkin & Dess, 1996:138). Miller and Friesen's (1978:921) understanding of pro-activeness is that it is an inherent attitude of the leader, as opposed to that of the follower. Similarly, Venkataraman (1989:949) suggests that pro-activeness is seeing new opportunities which may or may not be related to the present line of operations, introduction of new products and brands ahead of competition, strategically eliminating operations which are in the mature or declining stages of the life cycle.

Equally, pro-activeness is related to the exploration of opportunities (McAnderson, 2009:71) through entrepreneurial behaviour in search of new market niches ahead of one's competitors. Seemingly these relationship forms the basis on which a relarionship could be supposed between proactivness and employment generation.

1.5.2.4 Competitive Aggressiveness and Employment Growth

Competitive aggressiveness refers to a firm's propensity to directly and intensely challenge its competitors (Lumpkin & Dess, 1996:148) to improve its position in the market place or consolidate an already attained position (Chang, Lin, Chang & Chen, 2007:1000). It is important to note that, within the context of EO, competitive aggressiveness is a reaction to competitive trends and demands that already exists in the market place (Lumpkin & Dess, 2001:434). It, therefore, translates to response to threats from competitors.

Businesses that are competitively aggressive are characterised by responsiveness which may take the form of head-to-head confrontation; for example, when a business enters a market that another competitor has identified (Lee & Sukoco, 2007:550). Responsiveness may also take the form of a business being re-active, such as when a business lowers prices in response to a competitive challenge. Furthermore, competitive aggressiveness also reflects a willingness to be unconventional rather than relying on traditional methods of competing. This includes, among others, adopting unconventional tactics to challenge industry leaders, analysing and targeting a competitor's weakness and focusing on high-value-added products (Lumpkin & Dess, 2001:434).

According to Lumpkin and Dess (2001:431) competitive aggressiveness has generally been investigated less frequently. The possible reasons being that, similar to autonomy, competitive aggressiveness has not been part of the original dimension of EO and some theorists have treated competitive aggressiveness and pro-activeness as if they were interchangeable. Amongst the dimensions, competitive aggressive behaviour may, however, be less related to a growth-orientated strategy since Moreno and Casillas (2010:284) emphasised that it is a re-active approach to competition or behaviour in defence of market position. Their empirical study found no relationship between competitive aggressiveness and

growth in emplyment. In contrast, le Roux and Bengesi (2014:617) examined this relationship within emerging economies and a positive relationship was observed.

1.5.2.5 Autonomy and Employment Growth

Autonomy refers to the independent actions by an individual or team in bringing forth an idea or a vision and carrying it through to completion (Lumpkin & Dess, 1996:140; Lee & Sukoco, 2007:551). To encourage autonomy, businesses use both "top-down" and "bottom-up" approaches. The top-down approaches include aspects such as management support for programmes, giving incentives that foster a climate of entrepreneurship and welcoming autonomous decision-making (Dess & Lumpkin, 2005:149). In this regard, Dess *et al.* (2003:355) are of the opinion that such business design features may be as important to entrepreneurial success as the other dimensions of EO. To encourage autonomy from the bottom up will require special initiatives (Lumpkin *et al.,* 2009:49).

Furthermore, many businesses have engaged in actions such as flattening hierarchies and delegating authorities to operating units. While these moves are intended to foster autonomy, the process of business autonomy requires much more than changes in design. Businesses must actually grant autonomy and individuals must be encouraged to exercise it (Mumford, Scott, Gaddis & Stange, 2002:724). Although Lumpkin and Dess (1996:140) proposed the inclusion of autonomy as a dimension of EO in 1996, very few studies have investigated autonomy as an element of EO (Lumpkin *et al.,* 2009:48). Consequently, the relationships between autonomy and employment growth have not been debated. Autonomy, however, constitutes a basis for innovative and entrepreneurial behaviour (Morena & Casillas, 2010:270) and businesses that rely on an entrepreneurial orientation to create new value and grow must encourage entrepreneurial behaviours by allowing employees to act and think more independently (Gurbuz & Aykol, 2009:324). Hence a relationhip with employment growth is presupposed and will be investigated in this study.

1.6 IMPORTANCE AND BENEFITS OF THE STUDY

The dimensionality of EO has been an ongoing debate among theorists. Whilst the earlier theorists (Miller, 1983; Covin & Slevin, 1989) retain the uni-dimensional view, others (Lumpkin & Dess, 1996; Hughes & Morgan, 2007; Pearce, Fritz & Davis, 2010) perceive EO as consisting of independent dimensions that vary independently. Considering that entrepreneurship theories have contextual relevance, this study examines how EO features in terms of its dimensionality within the context of SMMEs in South Africa. Furthermore, it assesses the degree of EO among SMMEs in South Africa, implicitly the intensity of firm-level entrepreneurial behavior.

The need for an enabling business environment has been reiterated for the survival and growth of small businesses in South Africa. In addition to this is the need for opportunity-driven entrepreneurial venturing at all levels of the economy. This research examines the EO of the entire SMME cohort in an empirical attempt to confirm the relationship between the business environment and firm-level entrepreneurial behaviour, identifying which dimensions of EO are most influenced by variables of the business environment.

Amongst other measures of firm growth, employment growth is considered as more stable compared with sales or asset growth (Baum, Dean & McDougall, 2000:253; Sanbharya, 2011; Sitlington & Marshall, 2011:62). This is based on the rationale that firms would only expand the number of workers if they are certain that their business volume can stabilise in the future (Delmar, 1997:56; Carton & Hofer, 2006:1307). The measurement of growth in assets is plausible only in sectors with high capital structure such as manufacturing and construction and growth in sales subject to the effects of inflation (Davidsson, Delmar & Wilklund, 2006:67). Employment growth is, however, applicable to all industries irrespective of their capital structure or requirement. It is indicative of the job creation dynamics of the economy and – from a broader perspective – could indirectly be a measure of macro-economic growth. It could also be considered as a measure of firm's economic contribution for the common good (Dunkelberg, William & Cooper, 2012:473). Against this backdrop, employment growth emerges as a better measure of a firm's growth.

Employment growth at firm level, being an object of focus of this study, draws attention to the job creation potential of SMMEs in SA. Since EO measures entrepreneurial proclivity, it assesses the degree to which entrepreneurial behaviour associates with employment generation and provides an insight to the level of entrepreneurship development and how it associates with job creation in South Africa.

From a broader perspective, it is expected that this study will contribute to the theory of EO, the role of the environment and employment growth in small business research. For researchers, elaborating on the antecedents of entrepreneurial behaviour, by considering the dynamism and hostility of the environment and then its association with growth in employment amongst SMMEs should yield interesting findings. It is expected that this study will enhance the understanding of the small business environment in South Africa, her level of entrepreneurship development and how it possibly could enhance job creation. Findings from the study could assist economic- and small-business- policy making as it contributes to the debate on small business development in South Africa.

1.7 RESEARCH DESIGN AND METHODOLOGY

An ex post facto research design has been considered for this study as it entails events that have occurred already and present conditions (Leedy & Ormrod, 2015:212). The objective is to test the hypothesised relationships and answer the research questions posed (Cooper & Schindler, 2008:140). Based on the nature of the research questions and considering that only numerical data will be generated for statistical analysis, a quantitative approach is followed by the study.

The research instrument is a structured questionnaire which consists largely of existing measures. Biographical data are collected on nominal and ordinal scales and responses to target questions, which address the research objectives, are obtained using a 7-point Likert scale. In measuring the dimensions of EO (innovativeness, pro-activeness risk-taking, competitive aggressiveness and autonomy) Hughes and Morgan's (2007:651) 18-item scale is used. To measure environmental dynamism (ED) and environmental hostility (EH), Miller and Friesen's (1982:1) 5-item scale and Slevin and Covin's (1997:189) 6-item scale are used,

respectively. Following the economist approach, employment growth is measured using the law of proportionate effect – Gibrat's law (Gibrat, 1931). In measuring employment growth, Gibrat's law entails two observations of the numbers of employees in a business and the number of years of business operation to obtain the annual growth rate of the firm. This law assumes that the growth rate of a firm is constant (Davidson & Wiklund, 2006:55). The advantage of Gibrat's (1931) model is that it does not consider employment growth as a quantum leap and is less sensitive to the number of employees at start up.

1.8 DELIMITATIONS OF THE STUDY

It is noteworthy that in South Africa, SMMEs can be defined based on the number of employees. They are classified into micro, very small, small and medium enterprises based on the number of employees being less than 5, 20, 50 and 200 respectively depending on the industry. This is discussed in details in chapter 3 as it presents small businesses in South Africa. Some delimitations constitute the boundary for this study as it is required that the sample elements conform to certain criteria. Firstly, enterprises considered in this study must operate within the SMME cohort as stipulated by the National Small Business Act, Act No. 102 of 1996, as amended in 2004. Secondly, respondents are entrepreneurs, small business owners or managers of SMMEs. Thirdly, the study is restricted to positive employment growth and responses from enterprises showing no growth or negative growth are not considered for analysis. Fourthly, the study is restricted to SMMEs currently operating across all the provinces of South Africa. They are Gauteng, North-West, Limpopo, Mpumalanga, Free State, KwaZulu- Natal, Eastern Cape, North Cape and Western Cape Provinces. Section 6.2.7 describes the geo-polication locations of the respondents according to these provinces

1.9 ETHICAL CONSIDERATIONS FOR THE STUDY

Cooper and Schindler (2014:14) reiterate the need for high ethical standards in business research. Therefore, the researcher will ensure that:

- All respondents are informed in writing, stating the objectives of the research.
- All data collected will be treated with strictest confidence to ensure confidentiality.

- The study will ensure quality control in eliciting information from respondents through the use of correct and complete questionnaires.
- All information pertaining to the respondents will remain the property of the researcher and not be used for any purpose except for the execution of this research study.
- No inducement is offered to respondents for participation in the research.

1.10 PROPOSED CONTRIBUTION OF THE STUDY

This study will contribute to existing literature on the business environment, EO and firm growth within the context of SMMEs in South Africa. It responds to the call to embrace the larger issue of context (Miller, 2011:880) and to move research on EO from its performance outcomes to its antecedents; in this study, task environment variables dynamism and hostility are considered as precursors of EO. It is expected that this will enrich the understanding of the environment-EO-employment growth relationship.

Furthermore, since this study is directed exclusively toward employment growth as an entrepreneurial outcome, it goes further than studies that have aggregated indicators of growth or performance together as a single construct. In measuring employment growth, the study goes beyond the use of a relative variation index as employed by other researchers (Gubuz & Ayokol, 2009:328; Janssen, 2006:306 & Janssen, 2009:319). In this study, the period of growth is considered and employment growth is indicated by the annual growth rate of the firm. Furthermore, the use of Gibrat's (1931) law produces an objective measurement of employment growth. It goes beyond the perception of growth or growth aspirations as measured by Lotz and van der Merwe (2013:22) and it affords less sensitivity to the initial size of the firm. Therefore, it provides a more comprehensive assessment of the relationship between the business environment, entrepreneurial intensity and employment growth of small businesses.The study also contributes to the stream of research focusing on the individual effects of the dimensions constituting EO and responds to Miller's (2011:880) call to consider seriously the individual components of EO for further research. Considering the individual dimensions of EO provides clarity on which of its constituents is most associated with a particular business environment and bears some association with growth.

1.11 STRUCTURE OF THE THESIS

This thesis consists of the following chapters:

Chapter 1: Introduction to the Study

The first chapter introduces the study as it presents the background to it. It identifies and elaborates on the problem which informs the study. It goes further to expound the purpose of the study and, in the process, generate its primary and secondary research objectives. It defines the key terminologies used in this study and provides a theoretical underpinning to it. The chapter briefly explains the research design, methodology and the delimitations of the study. It also sheds light on its proposed contribution to the current body of knowledge.

Chapter 2: Entrepreneurial Orientation

This chapter contains a literature review on entrepreneurship and its relevance to economic growth at the macro- and micro-levels. The primary focus will be entrepreneurial orientation and it will reflect on emergence of the construct, expatiate on its underlying theories and why EO as viewed has firm-level entrepreneurial behaviour. The dimensions, innovativeness, risk-taking, pro-activeness, competitive aggressiveness and autonomy will be examined from a uni-dimensional and multi-dimensional perspective. The chapter also examines different measurement models that have been used for EO in previous studies.

Chapter 3: The Environment and Small Businesses in South Africa

Chapter 3 is in two parts as it addresses the concept of the business environment and provides insight to small businesses within South African environment. The first section discusses the concept of the external environment commencing with relevant theories that captures the environment expatiating on its role in the performance of firms. It elaborates on how the environment has featured in relation to entrepreneurship and the performance or growth in models presented in previous studies. This chapter highlights the bi-directional nature of the environment and entrepreneurial posture. It then focuses on the moderating role of task environment

on the EO-performance relationship. The second section of this chapter sheds light on the significance of small enterprises and the importance of SMMES in South Africa. Furthermore, it provides defintions to a small business both from based on diffrent perspectives. This chapter discusses small businesses within the local context and considers the current business environment in South Africa in terms of competitiveness, ease of doing business and entrepreneurial activity.

Chapter 4: The Environment, Entrepreneurial Orientation, and Employment Growth

Chapter 4 draws attention to the relationships between the environment and EO, as the study seeks to illuminate the antecedents of firm level EO with regard to dynamism and hostility. The chapter discusses the modelling of small firm growth and describes the theoretical foundation that informs its definition in the literature. In addition, it reviews studies that have considered employment growth. Further, it elaborates on relationships between each of the dimensions of EO and employment growth. It also considers the moderating role of the environment on the relationship between EO and employment growth.

Chapter 5: Research Design and Methodology

Chapter 5 will discuss the research design and methodological approach employed in this study. It commences with a restatement of the research problem and aligns the primary and secondary research questions with the hypothesis generated in Chapter 4. It elaborates on the research paradigm in this study in terms of ontology, epistemology, methodology, methods and sources and provides a justification for the quantitative approach and survey method utilised in this study. In this chapter, the measurement instrument and pilot study are discussed as well as the sampling design, data collection and analysis techniques. In addition, the techniques for selecting respondents for the study and data sources are explained. An assessment of the quality and rigour of the research design is also discussed.

Chapter 6: Presentation of Research Findings

Chapter 6 presents the descriptive statistics of the study which consist of the demographic details of the questionnaire and the measurement item statistics. The descriptive phase will consist of the correlation analysis as it describes the association between the constructs involved in the study. In assessing the validity and reliability of the measuring instrument, Chapter 6 uses statistical techniques such as exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Results of associated tests, such as Kaiser-Meyer-Olkin (KMO) test, Bartlett's test, factor loadings and procedures such as factor extraction and factor rotation are discussed in detail. The reliability of the measuring instruments is assessed on the basis of Cronbach's alpha and composite reliability values. The results of discriminant analysis and goodness-of-fit indicators of the CFA are also presented and discussed in this sub-section. The final section of the chapter explores the relationships between the latent variables using inferential statistical methods, such as regression analysis and Partial Least Square-Structural Equation Modelling (PLS-SEM). The inferential statistical procedures will also involve a test of differences between groups of respondents and between the factors as measured against certain latent variables. In interpreting the results of statistical tests and analyses, it relates them to existing literature and other empirical studies. The chapter concludes with a discussion of the characteristics of the sample collected and how it relates to findings in this study.

Chapter 7: Conclusions and Recommendations

Chapter 7 contains a summary of the findings of this research. It lays emphasis on the central ideas which can be drawn from both the literature and an empirical study. It highlights the contribution that the study has made to existing knowledge in terms of theory and methodology. This chapter elaborates the practical contribution of this study with respect to its managerial implications and its relevance to small business practice and policy formulation. In this chapter the limitations of the study are discussed as well as recommendations are made for future research.

CHAPTER 2
ENTREPRENEURIAL ORIENTATION

2.1 INTRODUCTION

The phenomenon of an entrepreneurial orientation (EO) as a driving force behind the organisational pursuit of entrepreneurial activities has become a central focus of entrepreneurship and strategy literature, and the subject of more than three decades of research (Covin & Wales, 2012:677). Slevin and Terjesen (2011:973) observe that seminal contributions by Miller (1983), Miller and Friesen (1982), Covin and Slevin (1989, 1991) and Lumpkin and Dess (1996) have each accumulated over 1,000 citations. Gupta and Dutta (2016:6) state that EO is now widely acknowledged as one of the most central and prominent concepts of all management science. They describe EO research as an evolution that reflects the first three stages of the product life cycle: introduction, growth and maturity. This maturity is evidenced by the breadth and depth of EO scholarship evolving into a meta-analysis by Rauch *et al.* (2009:761), review and synthesis by Wales (2016:3) and an assessment of the current status and future agenda (Wales, Gupta & Mousa, 2013:357; Martens, Lacerda, Belfort & de Freitas, 2016:556). In fact, research on EO is gaining momentum in scholarly outlets beyond the entrepreneurship domain (Wales *et al.,* 2013:357). Moreover, within the field of entrepreneurship, EO is receiving greater attention than the broader topic of corporate entrepreneurship (Covin & Lumpkin, 2011:855). This trend is perhaps indicative of the fact that EO is a relevant phenomenon in the practical sense.

EO has been conceived generally as an organisational decision-making proclivity favouring entrepreneurial activities (Lumpkin & Dess, 1996:135). Ireland, Covin and Kuratko (2009:19) contend that EO is part of corporate entrepreneurship and it manifests within firms as an organisational state through entrepreneurial processes and behaviours. Lumpkin and Dess (2001:432) observe that the concept of EO in explaining the mindset of firms engaged in new ventures provides a useful framework for researching entrepreneurial activity. The prominence of the concept of EO within management research stems from the assumption that it represents a

continuous variable (or set of variables) upon which all organisations can be positioned or plotted. This assumption contributes to the view that all organisations fall somewhere along a conceptual continuum, ranging from conservative to entrepreneurial (Barringer & Bluedorn, 1999:421; Covin & Slevin, 1998:217), or in a multidimensional conceptual space that captures the domain of "being entrepreneurial" (Antoncic & Hisrich, 2003:4; Lumpkin & Dess, 1996:137). Such investigations of the EO of firms have directed organisational orientation toward entrepreneurial activity irrespective of whether they are new or established (Su, Xie & Li, 2011:558; Messersmith & Wales, 2013:151), small or large (Kraus, Rigtering, Hughes & Hosman, 2012:161; Dess & Lumpkin, 2005:147), public or private (Caruana, Ewig & Ramaseshan, 2010:43; Basardien, Parker, Bayat, Friedrich & Appoles, 2014:45). As a matter of fact, researchers have considered the role of EO in international business venturing (Covin & Miller, 2013:11; Felzenstein, Ciravegna, Robson & Amorós, 2015:145; Ayso & Navarrete-Báez, 2018:80) and among ethnic groups (Basardein *et al.,* 2014:45). Given its broad applicability, it is not surprising that the concept is being adopted extensively.

This chapter examines the development of EO, with particular reference to the contributions of scholars that have influenced the conversation since its emergence. It considers the conceptualisation of the construct and how it has been defined by researchers. It clarifies the dimensions that constitute the EO domain and describes how each of them portrays firm-level entrepreneurship behaviour. Additionally, the chapter reflects on the advancement of the EO theory in research and elucidates on the different perspectives from which it been examined. Finally, it attempts to shed light on EO, making reference to specific classifications and measurement models.

2.2 EVOLUTION OF THE ENTREPRENEURIAL ORIENTATION CONSTRUCT

EO which was initially described as "entrepreneurial strategic posture" by Covin and Slevin (1989) is derived from two major streams of knowledge – the strategy and organisational behaviour literature and two major events triggered the evolution of the construct. First are the three variables proposed by Miller (1983) that capture firm level entrepreneurship as a phenomenon, followed by the acceptance and use of the instrument that had been developed by Khandawalla (1977). The primary aim

of these researchers was to conceptualise a style of management to be described as entrepreneurial (Covin & Slevin, 1989:78). Hence it is pertinent to this study to present how EO as a construct has emerged over time.

2.2.1 Khandawalla and Miller: Investigating Firm Archetypes

The earliest works that contribute to EO can be drawn from the stream of research initiatives in the early 1970s by Pradip Khandawalla, Henry Mintzberg and Danny Miller at McGill University Canada. Their research ideas were premised on Khandawalla's (1973) contingency perspective that proposed that the performance of a company should not be measured in terms of organisational attributes (strategy, structure, management style), but should result from the interplay of these dimensions within a specific environment characterised by some degree of hostility, uncertainty, and heterogeneity. Khandawalla (1977) was concerned about organisational attributes in relation to performance and went further to develop research hypotheses for empirical testing. These hypotheses inspired scholars in the field of strategy.

An example is Miller's (1976) thesis titled "Strategy Making in Context of Ten Empirical Archetypes" which shares Khandawalla's perspective in an endeavour to isolate firm archetypes. The term "archetypes" connotes the possible combinations that become apparent as a result of aggregating key characteristics of an organisation. Strategy, structure, control, and management style are examples of features that can be more or less balanced within a given environment.

Miller's work refers to living beings and their modes of adaptation. He presents a framework in line with biological approaches in the study of organisational phenomena. This entails the mobilisation of three categories of variables to explain the successes or failures of firms and their attempts to adapt and survive. As described in Miller and Friesen (1977; 1978; 1980), this framework entails the stimulus, setting or environment of the organism, its structural and organisational attributes and the behavioural repertoire that corresponds with its strategy.

2.2.2 Miller and Friesen: Entrepreneurial and Conservative Firms

Miller and Friesen (1982:10) draw attention to the distinction between two types of strategic behaviours. Some firms are seen as entrepreneurial whilst others are seen as more conservative. This distinction expresses their forms of strategy that lead to a given orientation. As a result, two types of innovation strategies can be identified depending on whether they are performed in response to environmental constraints (conservative strategies) or whether they proceed from strong convictions by top management who value innovation as such, independently of the external context (entrepreneurial strategies). Miller and Friesen (1982) use innovation and risk-taking as criteria for the two groups tested. They link these criteria directly to the profiles of the top managers' goals and temperaments. They opine that the choice of a strategy – entrepreneurial or conservative – is thus determined more by the nature of top managers who are either venturesome (valuing innovation) or conservative (viewing innovation as costly and disruptive to production efficiency).

They argue that conservative firms decide to innovate only when constrained by a threatening environment whereas entrepreneurial firms innovate boldly and regularly while taking considerable risk with their product-market strategies. Miller and Friesen (1982:11) posit that the determinants of product market innovation in firms are to a greater extent a function of the strategy being pursued rather than the environment or structural characteristics. This conclusion is supported by the strength of relationship found between the top managers' internal locus of control and their strategy-making behaviour. In their study, strategy is assessed using variables that interrogate firm innovativeness, risk-taking and pro-activeness, factors which would later constitute an entrepreneurial orientation. Their study showed that top managers tended to pursue more product-market innovation, undertake greater risks and lead rather than follow competitors (Miller & Friesen, 1982:13). In view of this an entrepreneurial strategy was being confirmed.

Miller's (1983) seminal article further contributed towards understanding entrepreneurial behaviour as being composed of these three distinct variables. In Miller's paper an entrepreneurial firm is presented as one that engages in product-market innovation, undertakes somewhat risky ventures and is the first to come up with pro-active innovations. Conversely, a non-entrepreneurial (or conservative) firm

is defined as one that innovates very little, is highly risk-averse and imitates the moves of competitors instead of leading the way (Miller, 1983:771). Therefore, the extent to which a firm is entrepreneurial is assessed by a composite weighting of three variables – innovativeness, risk-taking and pro-activeness – measured using an arithmetic average of the score obtained from these variables. As stated by Covin and Wales (2012:680), Miller (1983) implicitly views EO as the intersection of, or shared variance among, these dimensions. In the absence of covariation among them the presence of EO according to Miller's conceptualisation should not be claimed.

2.2.3 Covin and Slevin: Entrepreneurship as a Firm Behaviour

Covin and Slevin were the earliest scholars to present entrepreneurship as an expression of firm behaviour. They presented a conceptual model of entrepreneurship as a firm behaviour which encapsulates the elements described by Miller and Friesen (1982) and introduces a detailed description of an entrepreneurial posture

Their model postulates entrepreneurial behaviour as one of the implementation channels of firm level strategy. Covin and Slevin (1991) argue that entrepreneurial effectiveness is fundamentally a firm level phenomenon and an entrepreneur's effectiveness can be measured by his or her firm's performance, this being a function of both organisational and individual behaviours

Although it is admissible that individual level behaviour on the part of the entrepreneur is not the same as the organisation's action, the two will very often be similar. They observe that organisational level behaviour has a relationship with firm performance – hence, the adoption an organisational level perspective in the entrepreneurial process. Covin and Slevin (1991:8) argue that organisational level attributes (such as structure or culture) do not make a firm entrepreneurial just as an individual's psychological profile does not make a person an entrepreneur.

On the contrary, entrepreneurs are identified by their actions; organisational actions make them entrepreneurial. Therefore, behaviour is the central and essential element in the entrepreneurial process. Covin and Slevin (1991) stress that behaviour can be measured since it is visible and manifests in observable actions.

From Covin and Slevin's (1991) model, it can be seen that entrepreneurial posture is related directly to firm performance and is reflective of the external environment, strategy and internal variables. The present study's conceptual framework draws directly from their model as it concerns the role of the environment on EO and subsequently employment growth as an indicator of performance.

2.2.4 Lumpkin and Dess: A Radical Shift in Concept Definition

Attempting to clarify the difference between entrepreneurship and entrepreneurial orientation, Lumpkin and Dess (1996) expand on Covin and Slevin's (1991) model. According to Basso, Fayolle and Bouchard (2009:317), their clarification of EO informed the introduction of new elements; the exclusive use of the term "entrepreneurial orientation" subsequently replacing "posture" and "style" which had been used interchangeably, the initiation of two dimensions and an emphasis on the perspective of "new entry" (Lumpkin & Dess. 1996:136). These researchers introduced the dimensions of competitive aggressiveness and autonomy to the concept of a firm being entrepreneurial. Moreover, they argue that the earlier dimensions – innovativeness, pro-activeness and risk-taking do not need to co-vary for EO to be displayed by a firm as they can vary independently of each other in a given context (Lumpkin & Dess, 1996:139-140). From their perspective, what it means to be entrepreneurial, or which dimensions of EO are likely to contribute to new entry, depends upon considerations that lie beyond the boundaries of the construct, such as the organizational and environmental context of a firm (See Figure 3.4). Whereas Miller (1983) defines the construct of EO as requiring the concurrent exhibition of innovativeness, risk-taking, and pro-activeness, Lumpkin and Dess (1996) conceive of EO as not requiring an emphasis by the entrepreneurial organisation on any particular dimension or set of dimensions from the five they posit as capturing the essence of EO. Thus, the emergence of the multi-dimensional perspective to conceptualising EO.

Lumpkin and Dess (1996) make a clear difference between entrepreneurship and the process that leads to it, drawing on the distinction between the "how" (process) and "what" (result). They present entrepreneurship as new entry, that is, the act of launching a new venture either by a start-up firm or an existing firm or through internal corporate venturing. Although earlier scholars had refrained from delving

into the various manifestations of EO, they emphasised the nature of the entrepreneurial act while retaining the reference to an entrepreneurial orientation. This absolute shift of position is stated in explicating EO as follows:

> EO refers to the process, practices and decision-making activities that lead to new entry. It involves the intentions and actions of key players functioning in a dynamic process aimed at new venture creation. The key dimensions that characterise an EO include the propensity to act autonomously, a willingness to innovate and take risks and a tendency to be aggressive toward competitors and pro-active relative to market place opportunities (Lumpkin & Dess, 1996:136-137).

Although there is neither a singular or universally adopted conceptualisation of EO, Lumpkin and Dess' (1996) multi-dimensional conceptualisation is strengthened by Miller (2011: 879-880), whilst reflecting on his earlier work (Miller, 1983). Miller emphasised that for EO to develop, conceptual considerations such as making distinctions among the types of entrepreneurial initiatives such as "new entry" and taking seriously the differences between the components of the construct had become imperative. This tends to accentuate the multi-dimensional perspective to EO which forms the basis of this study.

2.3 DEFINING ENTREPRENEURIAL ORIENTATION

The notion of an orientation toward entrepreneurial activity has been given a variety of labels in research. These labels include entrepreneurial intensity, entrepreneurial style, entrepreneurial posture, entrepreneurial proclivity, entrepreneurial propensity and, in some instances, corporate entrepreneurship (Zahra, Jennings & Kuratoko, 1999:45). Given the various designations attached to the phenomenon it is perhaps not surprising that researchers have yet to settle on a widely accepted definition of EO. Table 2.1 presents a sample of the EO definitions advanced in prior research.

These definitions demonstrate distinction and diverse perspectives in the way EO is presented. It also shows that describing firm level entrepreneurship along with its processes and content have undergone transformation over the years. Additionally, it illustrates that there is no singular, overwhelmingly encompassing definition of the concept of EO as scholars seem to lay emphasis on different perspectives of what it means to be entrepreneurial and this is largely informed by their respective research paradigms. However, commonalties (such as novelty, ability to tolerate risk

and actively seeking out opportunities) seem to recur. The continued evolution of EO raises some expectations about what research on EO would offer in the near future as the environment within which firms operate as well as their internal characteristics and approaches to entrepreneurship are constantly modified. Since this study is contextual in nature as it considers the existence of EO within SMMEs in South Africa, the dimensionality of EO will also offer interesting findings.

2.4 DIMENSIONS OF ENTREPRENEURIAL ORIENTATION

Following the precedence of Lumpkin and Dess (1996), Hughes and Morgan (2007), Prearce, Fritz and Davis (2010), this study will consider five dimensions of EO and they are presented in Table 2.2 with their definitions. Irrespective of differences in conceptualisation, these dimensions seem to be well established in literature and have been the subject of the discussion in contemporary EO research. The three initial dimensions – innovativeness, risk-taking and pro-activeness have been adopted by Colvin and Slevin (1989); Wiklund and Shepherd (2005), Kuratko, Morris and Covin (2008), Gurbuz and Ayokol (2009), Richard, Wu and Chadwick (2009), and Frank, Kesseler and Fink (2010) among others. The two other dimensions of autonomy and competitive aggressiveness have been considered as constituents of EO in other studies (for example, Lumpkin & Dess, 2001; Dess & Lumpkin, 2005; Covin, Green & Slevin, 2006).

The present study adheres to the call to pay attention to the individuality of the components of EO (Miller, 2011:880). It observes that recurrent tendency in literature is to combine the three or five components, regress the resulting factor or component index on predictors or relate the factor to a dependent variable (most often firm performance). This approach is often warranted when the components are strongly correlated and for the purposes of theory development or the testing of an overall EO factor (Covin & Wales, 2012:677). However, research has shown that there are times when the individual components of EO are more convincing and credible than the aggregated index. This has been revealed in studies such as Kreiser, Marino and Weaver (2002), Lumpkin and Dess (2001), and Poon, Ainuddin and Junit (2006). Therefore, the multi-dimensional perspective may offer a deeper understanding of EO.

Table 2.1: Selected definitions of entrepreneurial orientation

Author(s)	Definition of Entrepreneurial Orientation
Mintzberg (1973:45)	In the entrepreneurial mode, strategy- making is dominated by the active search for new opportunities as well as dramatic leaps forward in the face of uncertainty.
Khandawalla (1977:21)	The entrepreneurial management style is characterised by bold, risky, aggressive decision making.
Miller and Friesen (1982:5)	The entrepreneurial model applies to firms that innovate boldly and regularly while taking considerable risks in their product-market strategies.
Miller (1983:771)	An entrepreneurial firm is one that engages in product-market innovation, undertakes somewhat risky ventures and is the first to come up with pro-active innovation, beating competitors to the punch.
Morris and Paul (1987:249)	An entrepreneurial firm is one with decision making norms that emphasise pro-active, innovative strategies that contain an element of risk.
Covin and Slevin (1998:218)	Entrepreneurial firms are those in which top managers have entrepreneurial management styles as evidenced by the firm's strategic decisions and operating management philosophies. Non-entrepreneurial or conservative firms are those in which the top management style is decidedly risk averse, non-innovative and passive or reactive.
Merz and Sauber (1995:554)	Entrepreneurial orientation is defined as the firm's degree of pro-activeness in its chosen product market unit and its willingness to innovate and create new offerings.

Author(s)	Definition of Entrepreneurial Orientation
Lumpkin and Dess (1996:136-137)	EO refers to the processes, practices and decision-making activities that lead to new entry as characterised by one, or more of the following dimensions: a propensity to act autonomously, a willingness to innovate and take risks and a tendency to be aggressive toward competitors and pro-active relative to market place opportunities.
Zahra and Neubaum (1998:124)	EO is the "sum total of a firm's radical innovation, pro-active strategic action and risk-taking activities that are manifested in support of projects with uncertain outcomes.
Voss, Voss and Moorman (2005:1134)	……we define EO as a firm-level disposition to engage behaviour reflecting risk-taking, innovativeness, pro-activeness, autonomy and competitive aggressiveness that lead to change in the origination or market place.
Avlontis and Salavou (2007:567)	EO constitutes an organizational phenomenon that reflects a managerial capability by which firms embark on pro-active and aggressive initiatives to alter the competitive scene to their advantage.
Cools and Van den Broeck (2007/2008:27)	Entrepreneurial orientation refers to the top management's strategy in relation to innovativeness, pro-activeness and risk-taking.
Pearce, Fritz and Davis (2010:219)	An EO is conceptualised as a set of distinct but related behaviours that have the qualities of innovativeness, pro-activeness, competitive aggressiveness, risk-taking and autonomy.
Source: Adapted from Covin and Wales (2012:679).	

Table 2.2: Dimensions of entrepreneurial orientation

Dimension	Definition
Autonomy	Independent action by an individual or team aimed at bringing forth a business concept or vision and carrying it through to completion.
Innovativeness	A willingness to introduce newness and novelty through experimentation and creative processes aimed at developing new products and services, as well as new processes.
Pro-activeness	A forward-looking perspective characteristic of a marketplace leader that has the foresight to seize opportunities in anticipation of future demand.
Competitive aggressiveness	An intense effort to outperform industry rivals. It is characterised by a combative posture or an aggressive response aimed at improving position or overcoming a threat in a competitive marketplace.
Risk-taking	Making decisions and taking action without certain knowledge of probable outcomes; some undertakings may also involve making substantial resource commitments in the process of venturing forward.
Source: Dess and Lumpkin (2005:148).	

For instance, risk-taking may be especially important when starting a business (at start-up phase), innovation more significant in the high-tech industry or within any highly competitive industry environment and competitive aggressiveness invaluable in gaining access into an international business environment. This implies that different environmental challenges might require varying components of EO. Even within a carefully defined context, the differences between the components might be useful in understanding entrepreneurial behaviour. Moreover, some components – such as pro-activeness – may bear a linear relationship with performance or growth, whereas risk-taking could indicate a curvilinear relationship. Although such disaggregation of components sometimes distances the research from the original EO construct, Miller (2011:880) emphasises that it may not make much sense to combine the dimensions in divergent situations. In this study five dimensions of EO are hypothesised to have an association with the environment and employment growth and therefore a discussion on each of the variables is essential.

2.4.1 Autonomy

In a practical sense, entrepreneurship has flourished because independent-minded people decide to leave secure positions to promote novel ideas or venture into new markets rather than allow organisational processes or cultural norms to inhibit them. Within an organisational context, it is the freedom granted to individuals and teams who can exercise their creativity and champion promising ideas that stimulate entrepreneurship. An important impetus for new entry activity is the independent spirit necessary to advance new ventures (Lumpkin & Dess, 1996:140); that being so, the concept of autonomy is considered as a key dimension of EO.

Autonomy has been defined as the independent action of an individual or team that brings forth an idea or vision and carries it through to completion (Lumpkin & Dess, 1996:140; Lee & Sukoco, 2007:551). From a broader perspective, Callaghan and Venter (2011:31) include the elements of independent action and decision making. Hence it is stated as a tendency toward independent action which is a key component of an entrepreneurial orientation, since intentionality must be exercised. This implies the will and capacity to be self-directed in the pursuit of opportunities, within an organisational context and actions taken free of stifling bureaucratic constraints**.**

Prior to Lumpkin and Dess' (1996) introduction of autonomy as a dimension of EO, Burgelman and Sayles (1986:51), and Kanter (1983:82) observed the need for organisations to make an extra effort to foster entrepreneurial behaviour to create value and stimulate growth. This involves permitting organisational members (both individuals and teams) to operate outside organisational norms and strategies where they could think and act more independently. Other researchers support this, arguing that it is often the autonomous efforts of key individuals acting outside the chain of command that generate entrepreneurial outcomes (Burgleman, 1983:223). Such individuals are referred to as "champions" who provide the impetus needed to pursue opportunities or to implement an entrepreneurial vision (Bird, 1998:442; Green, Brush & Hart, 1999:103). Autonomous individuals operating outside their usual work routines and constraints to stimulate entrepreneurial development and growth represent an important source of creativity and initiative in many organisational settings.

In the context of EO, autonomy is essential to the process of leveraging a firm's existing strength, identifying opportunities that are beyond its current capabilities and encouraging the development of new ventures and improved business practices. To encourage autonomy, business use either a "top-down" or "bottom-up" approach. The top-down approach includes aspects such as management support for programmes, giving incentives that foster a climate of entrepreneurship and welcoming autonomous decision-making (Dess & Lumpkin, 2005:149). In this regard, Dess, Ireland, Zahra, Floyd, Janney and Lane (2003:355) opine that such business design features may be as important to entrepreneurial success as the other dimensions of an EO. To encourage autonomy from the bottom up will require special incentives and structural arrangements designed to develop and build support for entrepreneurial initiatives (Lumpkin *et al.,* 2009:49).

In a top-down approach, businesses may need to engage in actions such as flattening hierarchies and delegating authority to operating units. Although such moves are intended to foster autonomy, the process of business autonomy requires much more than a change in the organisation's structure. Businesses must actually grant autonomy and individuals must be encouraged to exercise it (Mumford, Scott, Gaddis & Stange, 2002:724).

Autonomy constitutes one of the bases for innovation (Casillas & Morena, 2010:271) and businesses that rely on an entrepreneurial orientation to create new value and growth must encourage entrepreneurial behaviour by allowing employees to act and think more independently (Gürbüz & Aykol, 2009:324). Autonomy is therefore essential to the process of leveraging a business' existing strengths, identifying opportunities and encouraging the development of new ventures and/or improved business practices (Lassen, Gertsen & Riis, 2006:361). Prior research (Rauch *et al.,* 2009:764; Brock, 2003:57) also supports the view that autonomy fosters innovation; promotes the launching of new ventures and increases the competitiveness and effectiveness of businesses.

2.4.2 Risk-taking

The term "risk" is defined by Dewett (2004:258) as "the extent to which there is uncertainty about an occurrence or disappointing outcomes of a decision will be

realised." In this regard, Mullins and Forlani (2005:51) characterise "risk" as either the potential to act too quickly on an unsubstantiated opportunity ("sinking the boat") or the potential to wait too long before acting ("missing the boat").

Risk is inherent in the operations of any business. Almost every decision taken by managers involves risk (Von Stamm, 2008:387). Often, corporate entrepreneurial businesses that have an EO are typified by risk-taking behaviour, such as incurring heavy debt or making large resource commitments, in the interest of obtaining high returns by exploiting opportunities in the market place (Bhardwaj, Agrawal & Momaya, 2007:134). However, this risk does not refer to extreme or uncontrollable risk, but rather to moderate and calculated risk (Morris *et al.,* 2008:62). Corporate enterprises may therefore not be high risk-takers (Lambing & Kuehl, 2007:19). They rather try to assess the risk they have to take, minimise it as much as possible and manage it (Timmons & Spinelli, 2009:52). These enterprises should be viewed rather as "risk-aware" but opportunity-focused (McBeth & Rimac, 2004:18).

Another aspect of risk-taking is the assumption, which is often made, that innovativeness and risk-taking are directly correlated, that is, doing more innovative things means taking higher risks. According to Morris *et al.* (2008:62), this relationship is far more complex. It presents some form of risk when business ignores new product/service opportunities and engages in little or no innovation. In this regard, Burns (2008:291) notes that while not innovating presents a minimal risk in the short term, it does create a high risk in the long term. In essence, businesses that do not innovate are faced with a higher risk of not perceiving market and technology shifts that are capitalised on by competitors. The opposite could also be valid as businesses that attempt to come up with breakthrough innovations that create new markets and redefine industries also face high risk (Morris *et al.,* 2008:63).

To ensure competitiveness, businesses need to exploit an EO with the inherent ability to sense, act and mobilise rapidly under uncertain conditions (McGrath & MacMillan, 2000:xiv). Conditions (such as globalisation, deregulation, technological and social change as well as the rapid changes in information technology) are forcing businesses to cope with swift and unexpected change, which has long been central to the theory of entrepreneurship (Shane, Locke & Collins, 2003:264).

2.4.3 Pro-activeness

The importance of initiative has been emphasised in the entrepreneurial process. Liberman and Montgomery (1988:41) argue in favour of the first-mover advantage as the best strategy for capitalising on market opportunities. By exploiting asymmetries in the market place, the first mover can capture unusually high profits and get a head start on establishing brand recognition. Thus, taking initiative by anticipating and pursuing new opportunities and participating in emerging markets has become associated with entrepreneurial venturing. This combination of foresight and drive in exploiting market opportunities is often referred to as pro-activeness (Lumpkin & Dess, 1996). Additionally, it entails acting in anticipation of future problems, needs or changes in the market place (Madesen, 2007:187).

Pro-activeness may be crucial to EO because it suggests a forward-looking perspective that is often accompanied by innovativeness or new venture activity. Miller and Friesen (1978:923) assert that the pro-activeness of a firm's decisions is determined by addressing the question of whether it shapes the environment by introducing new products, technologies, administrative techniques or it merely reacts to the environment. In theory, pro-activeness is displayed by a firm that is the quickest to innovate and the first to introduce new products or services. This is described in Miller's (1983) seminal definition of an entrepreneurial firm as being the first to come up with pro-active innovation. As first movers, businesses can control access to markets by dominating distribution channels, charge high prices and "skim" the market ahead of competitors (Wiklund & Shepherd, 2005:75), secure access to rare resources, gain new knowledge of key factors and issues, carve out market share and be in a position that is easy to defend and costly for rivals to overtake (David, 2007: 200).

First movers are, however, not always successful. Although the idea of acting in anticipation of future demand underlines the definition of pro-activeness, the component of being first in the market could be misleading. The introduction of novel products or breakthrough technologies is not always accepted by the market. Therefore, careful analysis of the environment and extensive feasibility research are needed for a pro-active strategy to lead to a competitive advantage (Dess & Lumpkin, 2005:151). Miller and Camp (1985:87) investigated 84 small business

units and found that the second firm to enter a new market was as pioneering as the first entrant and just as likely to achieve success through pro-activeness. Therefore, the position of Lumpkin and Dess (1996:146) seems to be more acceptable.

They allude to pro-activeness as the processes of anticipating and acting on future needs by seeking new opportunities that may or may not be related to the present line of operations and the introduction of new products and brands ahead of competition. Some of the activities that are therefore associated with pro-activeness include new opportunity identification and evaluation, identification and monitoring of market trends and new venture team formation (Kropp, Lindsay & Shoham, 2008:104). A pro-active business is therefore a leader rather than a follower, since it has the will and the foresight to seize new opportunities, even if it is not always the first to do so (Gürbüz & Aykol, 2009:323).

2.4.4 Innovativeness

The role of innovation in entrepreneurial firms has been re-iterated by a number of researchers (Miller & Friesen, 1982; Zahra & Neubaum, 1998; Lumpkin & Dess, 1996; Voss, Voss & Moorman, 2005; Pearce, Fritz & Davis, 2010). In fact, entrepreneurship has been linked directly to the management of innovation (Drucker, 2015:xiii). It stems from the idea of “creative destruction” which postulates that wealth is created when the existing market structure is disrupted by the introduction of new goods or services that shift resources away from existing firms and cause new firms to grow (see Schumpeter, 1976). The key to this circle of activity is the competitive entry of “new combinations” that propel the dynamic evolution of the economy. Thus, innovativeness has become an important factor used to characterise entrepreneurial activity. Innovativeness reflects a firm’s tendency to engage in new ideas, novelty, experimentation and a creative process that will result in new products, services or technological processes. Although innovation can vary in the degree of changes it makes, it represents a basic willingness to depart from existing technologies or practices and venture beyond the current state.

Innovativeness has also been identified as a key driver of progress and development as well as a source of invention in all areas of society, technology and

administration (Farazmand, 2004:8; Boso *et al.,* 2016:5040). It is one business activity that has been most closely related to economic growth (Pece, Simona & Salisteanu, 2015:461). From a business perspective, innovativeness is considered to be a strategic instrument that serves to build and enhance business capabilities (Farazmand, 2004:5). It has been further described as the implementation of something new, original, significant or valuable as well as a significant change that occurs through an array of substantial improvements to a product, process or service (Guzman, Caeres & Ribero, 2009:317). Drawing further from these authors innovativeness could exhibit novelty in terms of product, service, process, programme or device. This includes ideas, approaches, methods, processes, structure, attitudes and culture as well as technological capabilities.

Firm innovativeness may present itself in different forms. It may occur as exploring a new product line, experimenting with a new advertising agent or a passionate commitment to master the latest in new products or technological advantages. There are numerous methods of classifying innovativeness and one of many others is between product-market innovation and technological innovation (Nekar & Roberts, 2004:779). Until recently research efforts have largely been directed toward technological innovativeness which consists primarily of product and process development, engineering, research and an emphasis on technical expertise and industry knowledge. Product market innovativeness suggests an emphasis on product design, market research, advertising and promotion (Miller & Friesen, 1978:921; Lyon & Ferrier, 2002:452; Zhang, Wu & Cui, 2015:297). However, this categorisation may be difficult to make because innovativeness frequently represents considerable overlap and blending of product-market and technological innovation as is the case of a technologically sophisticated new product designed to meet a specific market demand. In either case, innovativeness is an important component of EO because it is a reflection of the means by which firms pursue opportunities.

Moreover, a recurring issue in entrepreneurship research which is pertinent to this study is the different approaches to innovativeness by small businesses and large firms and their degree of effectiveness. Some researchers claim that innovativeness may be of greater importance for the SME sector than for large firms (Fritz, 1989:32;

Knight & Cavusgil, 2004:1; Pelham, 1999:33). Hamaciolglu, Grinstein and Goldman (2010:33) found innovativeness to be more predominant in large businesses. Moreover, it is not uncommon to find that smaller firms have less resources, either financial or human, in comparison with large firms (Forbes & Milliken, 1999:117) with which to pursue innovation. Difficulty accumulating sufficient financial resources often results in a lack of funds for research and development (Romero-Martinez, Oritiz & Ribero, & 2010:671). This is in addition to scepticism about assuming high risks, and reluctance to invest in costly technology (Hamaciolglu *et al.,* 2010: 36). Hence the shortfall in innovation by small firms.

Highly skilled human resources play a role in firm innovativeness as it often requires a systematic enquiry of firm capability, market demand and an understanding of industry trends (Galunic & Rodan, 1998:1193; Wiklund & Shepherd, 2003:1307). Moreover, the need for skill in innovation output may be more obvious in smaller than larger firms (Ribero, Soriano & Castrogionani, 2012:333). The limitation of finance in smaller firms constrains their accessibility to market information and prevents them from conducting research which could affect their propensity to develop new products (Burke & Jarrat, 2004:126; Kaufaman & Todtling, 2002:147). Hence, small businesses may not be able to advance innovatively on their own and may need to co-operate with other firms with common interests or become involved in joint ventures (Hanna & Walsh, 2002; Rogers, 2004:141). Since innovativeness is necessary for the survival and competitiveness of small enterprises, effective partnerships enable them to realise their entrepreneurial potential (Rhee, Park & Lee, 2010:65; Van de vrande, De Jong, Vanhaverbeke & De Rochemont, 2009:423).

According to Cassillas and Moreno (2010:269) the relationship between innovativeness and firm performance presents the greatest degree of consensus with most studies finding a positive relationship. For example, Rauch *et al.* (2009), Morena and Casillas (2008); Subramanian and Nilakanta (1996) and Kleinschmidt and Cooper (1991) all found a positive relationship between innovativeness and business performance and growth. As a result, there is a growing recognition that innovation has become the only sustainable source of growth, competitive

advantage and new wealth (Drejer, 2006:143; Hana, 2013:83; Aghion & Akcigit, 2017:29).

2.4.5 Competitive Aggressivness

Porter (1985:61), in his seminal work on technology and competitive advantage, observed that young firms are particularly susceptible to unfamiliarity with the industry environment and may need to take steps in establishing legitimacy and power relative to suppliers, customers and other competitors. This is due to the higher chances of failure amongst new businesses as compared with established ones. An aggressive stance and intense competition is necessary for survival and success of these new entrants. Therefore, competitive aggressiveness is a legitimate component of an entrepreneurial strategy. As introduced as a dimension of EO by Lumpkin and Dess (1996:148), competitive aggressiveness is a firm's propensity to directly and intensely challenge its competitors to achieve entry or improve position, which implies the capacity to outperform industry rivals in the marketplace.

However, other researchers have elaborated on its definition. Lumpkin and Dess (2001:431) state that it requires an intensified effort of a firm to outperform and undermine its industry rivals and this is characterised by a combative posture and aggressive response (Dess & Lumpkin, 2005:148). It can take the form of a deliberate action as well as re-active action and firms that are highly aggressive see competitors as enemies that must be conquered (Hughes & Morgan, 2007:654). They stress that his aggressiveness can be implemented through mobilisation of resources to launch direct attacks on competitors with the aim of overwhelming their market efforts, steadily eroding their competitive strength or establishing advantage through continual offensive tactics in an attempt to obtain market share from competitors.

Confrontation with competition may be required when a firm is gaining entry into a market that has already been identified by another firm and competitive aggressiveness is re-active when a firm lowers prices in response to a competitive challenge. This feature of an entrepreneurial advantage could be displayed through

the use of unconventional rather than traditional approaches of competition. Examples of these are adopting unusual tactics to challenge industry leaders analysing and targeting a competitor's weakness and focusing on high value-added products while carefully monitoring discretionary expenses (Lumpkin & Dess, 1996:149). Other approaches to competitive aggressiveness are reconfiguration which entails doing things differently, changing the context which requires redefining the product or service and its market channel or scope and outspending the industry leader (Porter,1985:68). The relevance of competitive aggressiveness as a constituent of EO is confirmed in an empirical study of the entrepreneurial processes of US firms in global markets in which Dean and Sharfman (1993:587) discovered that competitive aggressiveness explained more variance in the overall corporate entrepreneurship construct than did any other variable analysed.

It is important to note that amongst all the dimensions of EO, competitive aggressiveness and pro-activeness seem to be most similar and can even be confusing (Lumpkin & Dess, 1996:147). In fact, Covin and Slevin (1989:77) tend to use the terms interchangeably. Lumpkin and Dess (2001:429) allude to the similarity between the two concepts, suggesting the reason to be the market. Within an industry, the market is a playing field for both players and competitors. In an attempt to stay competitive each player strives to retain a share of the market as they seek to take opportunities within the same market. To corroborate this, Covin and Slevin (1998:79) assert that pro-active firms must often compete aggressively with other firms. In describing their entrepreneurial strategic posture scale, these authors refer to Miller's (1983) factors: innovativeness, pro-activeness and risk-taking. An entrepreneurial strategic posture is characterised by frequent and extensive technological and production innovation, an aggressive competitive orientation and strong risk-taking propensity by top management (Covin & Slevin, 1989:79). Similarly, Covin and Slevin (1991:10) describe an entrepreneurial posture as a firm's propensity to aggressively and pro-actively compete with industry rivals. Although a pro-active stance relative to competitors may be vital to entrepreneurial success, Covin and Slevin's (1991) approach tends to minimise important differences between competitive aggressiveness and pro-activeness.

On the contrary, Lumpkin and Dess (1996:147) emphasise that pro-activeness has more to do with meeting demand whereas competitive aggressiveness is about competing for demand. Lumpkin and Dess (2001:433) further distinguish the two concepts by defining pro-activeness as a forward-looking perspective that is characteristic of a market-place leader with the foresight to act in anticipation of future demand and consequently shape the environment, while defining competitive aggressiveness as the intensity of a firm's effort to outperform industry rivals. Competitive aggressiveness is considered to be a dimension of entrepreneurial behaviour that is characterised by a strong offensive posture. Its actions are often directed at competitors, but it could be defensive when it strives to maintain market position or aggressively enters a market that a rival has identified. Whilst pro-activeness is a response to opportunities, competitive aggressiveness is a response to threats which sums up how an entrepreneurial strategy emerges in response to the environment.

In drawing the discussion on the dimensions of EO to a close, there are specific characteristics that have been identified to be associated with entrepreneurial actions and researchers tend to have some form of consensus with respect to these features and behaviour. In Table 2.3 Farrington and Venter (2016:453) present an outline of phrases that describe the dimensions of EO. They identify key phrases or strategies associated with each of the five dimensions. It is observed that these definitions were sourced from recent EO research and dissected to highlight the different perspectives from which they are viewed. From their presentation one can gather that the connotation of each dimension in relation to a firm's level of entrepreneurial behaviour has largely remained unchanged and strategies being adopted for competition as entrepreneurial firms are similar to those introduced by earlier scholars. In fact, contemporary EO researchers still rely on these scholars' interpretation of the construct.

2.5 CONNECTING ENTREPRENEURIAL ORIENTATION TO THEORY

Besides taking the sub-dimensions of EO into consideration, Miller (2011:881) calls for its connection to theory as it is undeniable that certain theories have made important contributions to the understanding of organisations and how they function. An important choice that entrepreneurship scholars must make is that of theoretical perspective as the field will be better served if the issue of theory is addressed directly and unstated assumptions are avoided.

Therefore, it is necessary to examine how EO has been considered in empirical studies and how its theoretical framework has developed. Gupta and Gupta (2015:70) submit to four modes of theorising which has been employed by EO researchers; the universalistic, contingency and configurational views together with mediation research. In this section, these perspectives and their application are discussed.

2.5.1 Universalistic View

According to Andersen (2010:309), authors that adopt the universalistic perspective have argued for a “one size fits all” approach to EO. The universalistic approach is the simplest form of theoretical statement in the social science because it implies that the relationship between any given independent variable is universal across organisations (Delry & Doty, 1996:802). Theorists with a universalistic perspective posit that greater use of specific organisational practices will always result in better performance. They believe in universal laws of strategy that are valid across settings (Hambrick & Lei, 1985:763).

Table 2.3: Phrases describing the dimensions of entrepreneurial orientation

Description	Sources
Innovativeness	
• "Engaging in creativity and experimentation " • "Introducing new products and/or services" • "Technological leadership via Research and Development" • "Engaging in and supporting new ideas, novelty, experimentation and creative processes" • "A willingness to depart from existing technologies or practices" • "Venturing beyond the current state of art" • "Identifying new combinations of current products and services" • "Pursuing new opportunities"	Rauch, Wiklund, Lumpkin and Frese (2009) (based on Miller, 1983); Certo, Mos and Short (2009); Short, Payne, Brigham, Lumpkin and Broberg (2009); Wiklund and Shepherd (2005); Lumpkin and Dess (1996).
Risk-taking	
• "Taking bold actions" • "Venturing into the unknown" • "Borrowing heavily and/or committing significant resources to ventures in uncertain environments" • "Taking bold action in the face of uncertainty" • "Incurring debt or taking risks in order to seize an opportunity" • "Committing resources to projects with unknown outcomes" • "Willingness to break away from what is tried-and-true"	Rauch *et al.* (2009) (based on Miller, 1983); Certo *et al.* (2009); Short *et al.* (2009); Wiklund and Shepherd (2005); Lumpkin and Dess (1996).

Description	Sources
Pro-activeness	
• "Opportunity-seeking" • "Forward-looking" • "Introducing new products and services ahead of the competition" • "Acting in anticipation of future demand and/or needs" • "Creating a first-mover advantage vis-à-vis competitors" • "Anticipating opportunities to develop and introduce new products" • "Continuous environmental scanning" • "Acting in advance of change, recognising change" • "Eliminating operations in the mature or declining stages" • "Fast follower in new or existing markets" • "Willing to act on insights ahead of competition" • "Acting as leader rather than follower"	Rauch *et al*. (2009) (based on Miller, 1983); Certo, Mos and Short (2009); Short, Payne, Brigham, Lumpkin and Broberg (2009); Wiklund and Shepherd (2005); Lumpkin and Dess (1996).
Competitive aggressiveness	
• "The intensity of a firm's efforts to outperform /undermine rivals" • "Strong offensive posture" • "Aggressive (forceful) response to competitive threats/actions" • "Bias toward out-maneuvering and outdoing rivals" • "Is offensive as opposed to defensive in its approach to competition" • "Can be deliberate action or reactive actions" • "Unconventional tactics rather than head-to-head competition" • "A response to threats" • "Is reactive" • "An aggressive 'head-to-head' confrontation"	Nordqvist and Zellweger (2010); Certo *et al.* (2009); Rauch *et al.* (2009) (based on Lumpkin & Dess, 1996, 2001); Hughes and Morgan (2007) (based on Lumpkin & Dess, 1996, 2001).

Description	Sources
Autonomy	
• "Independent action by leaders or teams" • "Aimed at bringing forth a business model, idea or vision and carrying it through to completion" • "Giving authority to individuals or teams" • "Creating processes and systems that develop independent thinking" • "Granting freedom to be creative, to push for ideas and to change current ways of doing things" • "Flexibility"	Arzubiaga *et al.* (2012); Soininen, Martikainen, Puumalainen and Kyläheiko (2012); Zellweger and Sieger (2012); Nordqvist and Zellweger (2010); Rauch *et al.* (2009) (based on Lumpkin & Dess, 1996, 2001); Certo *et al.* (2009); Hughes and Morgan (2007) (based on Lumpkin & Dess, 1996).
Source: Farrington and Venter (2016:453).	

The learning curve effect which proposes that, as volume increases, fixed costs decrease is an example of a business concept that is almost universally observable (Kotha & Orne, 1989:213). A similar concept offered by the Profit Impact of Market Strategies (PIMS) programme relates market share with competitive advantage. Much earlier, Buzzel, Gale and Sultan (1975:102) stated that there is no doubt that the relationship between market share and competitive advantage can be translated into dynamic strategies for all businesses. Based on these laws, many researchers, practitioners and managers believe that a strategy of aggressively building cumulative experience and market share is good for all businesses. In summary, universalistic approaches subscribe to the idea of overarching strategies applicable across all competitive settings (Hambrick & Lei, 1985:763).

Accordingly, EO researchers taking the universalistic approach subscribe to the stance that firms that behave entrepreneurially perform better than those that are more conservative (Covin & Slevin, 1989:75; Anderson & Eshima, 2013:413). Similarly, Wiklund and Shepherd (2005:73), note that businesses that adopt a more entrepreneurial strategic orientation perform better. Matsuno, Menter & Ozsomer (2002:22) indicate that researchers seem to agree conceptually that entrepreneurial proclivity should contribute to a firm's superior performance and survival. This implies that, in general, firms are always better off investing in EO.

Rauch *et al.* (2009) observe that the conceptual arguments of previous research converge on the idea that firms benefit from highlighting newness, responsiveness and a degree of boldness. Hughes and Morgan (2007:653-654) posit that each of EO's five dimensions – innovativeness, pro-activeness, risk-taking, competitive aggressiveness and autonomy has a linear positive relationship with firm performance. Engelen, Neumann and Schmidt (2016) and Wiklund and Shepherd (2005:76) stress the dimensionality of EO by stating that both its separate and collective effects on firm performance are positive in nature.

However, the prevailing assumption about the universal positive impact of EO has not gone unchallenged (Andersen, 2010; Matsuno *et al.,* 2002). Andersen (2010:309) takes a critical look at the universalistic position in EO and observes that the notion of a positive EO-performance linkage is questionable because there are

studies that do not find support for a direct relationship. (See Messersmith & Wales, 2011; Wang, 2008; Wales *et al.,* 2013; Zhao, Li, Lee & Chen 2011).

However, it is important to note that lack of support for a relationship does not translate to no relationship in its entirety. It is certainly possible that the EO-performance relationship is robust, but design flaws, analytic issues or measurement problems have impeded evidence of a relationship. Nevertheless, considering the number of studies that have failed to support a direct positive relationship between EO and performance, there is a growing tendency among scholars to argue that there is scarcely any value from probing the direct EO-performance relationship. Gupta and Gupta (2015:72) note that too much discouragement of continued research on the universalistic effect of EO could be detrimental to the long-term development of the construct. In contrast to researchers who have taken the position that the EO-performance relationship is broadly accepted and that no direct effect hypothesis is needed, they emphasise the need for a baseline prediction to test for replicability and generality (Gupta & Gupta, 2015:72; Li, Huang & Tsai, 2009:440).

2.5.2 Contingency View

The contingency approach is more complex than the universalistic view because of its attention to situational demands. In general, it holds that the relationships between two variables depend on the level of a third variable. Contingency theorists assert that introducing moderators into bi-variate relationships helps reduce the potential for misleading inferences and permits a more precise and specific understanding of the relationship (Rauch *et al.,* 2009:765). They posit that the relationship between an independent variable and a dependent variable differs for distinct levels of the contingency variable (Delrey & Doty, 1996:811). In strategy research, for example, contingency theorists argue that the appropriateness of different strategies depends on the firm's competitive settings and contend that it offers the potential for organisational and strategy scholars to make a notable contribution (Hambrick & Lei, 1985:763).

A large and growing body of researchers indicates that the EO-performance linkage is contextual in nature. According to Rauch *et al.* (2009:771), the nature or degree

of the EO-performance relationship changes as a function of various endogenous and exogenous factors. Although the EO literature discusses a number of variables as potential moderators (Wales *et al.,* 2013b:93), there seems to be little consensus on what constitutes a suitable influence on the EO-performance relationship. Studies have examined a number of variables that potentially moderate the EO-performance relationship (Lumpkin & Dess, 1996:154; Zahra & Gavis, 2000:469). They range from internal contingences such as organisational structure (Kreiser & Davis, 2010), culture (Kreiser, Marino, Dickson & Weaver, 2010) and strategic-process effects (Covin, Green & Slevin, 2006) to external factors, namely, industry characteristics and the environment (for example, Lumpkin & Dess, 2001; Wiklund & Shepherd 2005; Frank, Kessler & Fink 2010; Moreno & Casillas 2008; Janssen 2009; Tiantian, Yeizhuang & Qianqian, 2014 have examined environmental contingencies). The next chapter discusses the concept of the environment and the roles of dynamism and hostility as task environment variables in detail.

Based on the resource-based view (RBV) EO studies that have considered internal contingencies have drawn attention to the resource aspect of the firm. They argue that, within the same industry, differences in resource endowment across firms can be a source of sustainable competitive advantage (Armstrong & Shimiza, 2007:959). EO studies have leaned on this view in their quest for internal moderators. They have explored the role of knowledge-based resources (Wiklund & Shepherd, 2005), resource orchestration competencies such as information and communication, technology capability and network capability (Wales *et al.,* 2013b) as well as tangible and intangible asset endowment (Anderson & Eshima, 2013). However, the usefulness of the RBV as a theoretical framework is still being debated (Barney, Ketchen & Wright, 2011:1299; Priem & Swink, 2012:10) and EO research is advancing through further interaction with the literature.

Other factors internal to the firm that have received attention in EO literature include strategic-process considerations such as decision-making participation (Covin *et al.,* 2006:57) which emphasises learning from failure and modes of strategy-making, social exchange processes among functional managers (De Clerque *et al.,* 2010:87) and human resource practices and philosophies among others (Messersmith & Wales, 2011:151).

2.5.3 Configurational View

The configurational approach draws on a holistic principle of inquiry and tends to be more complex than the universal and contingency theoretical perspectives (Delry & Doty, 1996:802). Deeper insights into the orchestrating themes and integrative mechanisms that ensure consistency and complementarities among various aspects of the firm are possible through consideration of the configurational logic. Configuration encompasses non-linear synergistic effects and higher order interactions that cannot be represented with conventional bi-variate contingency theories (Short, Payne & Ketchen, 2008:1053). With respect to EO, configurational research introduces variables based on specific, well-established theoretical frameworks. It then elaborates the relationship between EO and other variables relating it to general scientific laws and testing the multivariate logic to determine the constellation of attributes under which the particular theory applies to EO.

Engelen, Gupta, Strenger and Brettel (2015), for example, examine the role of transformational leadership in the successful implementation of EO. This study is premised on Podsakkoff, MacKenzie and Bommer's (1996) model that describes six behavioural facets of transformational leadership; articulating a vision, providing an appropriate role model, facilitating acceptance of group goals, setting high expectations, showing supportive behaviour and offering intellectual stimulation. Engelen *et al.* (2015) scrutinise the separate and collective effects of these leadership behaviours on the relationship between EO and firm performance and found that concurrent emphasis on multiple transformational leadership behaviours can help lower level employees accept entrepreneurship and encourage effective and efficient implementation of entrepreneurial activities throughout the organisation. Although this type of in-depth configurational research brings more theoretical precision, it is rare in the EO literature.

Nevertheless, Covin, Slevin and Covin (1990), Dess, Lumpkin and Covin (1997), and Wiklund and Shepherd (2005) have made a contribution to EO research through this approach. In addition, Miller (2011:885) makes a clear call to EO scholars to revisit the configurational approach. He explains that this approach would address the crisis in the contingency theory as research results from these studies (contingency) were non-cumulative in nature. In addition, the configurational

approach to EO research is beneficial and progressive for the field in terms of distinguishing among different types of moderator classifications, to richly describing each type, having a sufficiently fine-grained understanding of context and looking at the relationship between the variables within the types (Miller, 2011:886). In the literature, the configurational approach would utilise taxonomies that may incorporate variables in the environment, organisational strategy, culture and governance based on well-established models.

2.5.4 Mediation Research

It is common knowledge that mediators provide clarity between two related variables. This is because mediation research explains the process of "why" and "how" specific cause-and-effect relationships occur (Baron & Kenny, 1986:1173). Its purpose is to identify the process that leads from the predictor variable to the criterion variable. Basically, in a mediation model, the mediator is caused by the independent variable and the mediator is a cause of the dependent variable. Also known as indirect effect, intermediate effect or intervening effect, the mediator plays a crucial role in elucidating causal models (Frazier, Tix & Barron, 2004:115). In EO research, interests are drawn largely toward identifying the variables that link EO and firm performance. Validating the causal process through which EO is actualised in performance is of immense benefit to entrepreneurship research (Edmond & Wiklund, 2010:142).

According to Wales *et al.* (2013), attempts to investigate mediation relationships in EO studies have largely employed the use of knowledge-based variables. Wang (2008:645), for example, posits that organisational learning is the conduit through which EO is translated to firm performance. He argues that, to reap benefits from entrepreneurial endeavours, a firm must be committed to learning and open minded to new information and novel ways of doing things. The firm should also engage in shared interpretation of information to achieve consensus on the information being received.

Li, Hang and Tsoi (2009:440) provide another examination of internal learning processes through knowledge creation in mediating the EO-performance relationship with an interesting twist. Their study leverages Nonaka's (1994) model

of knowledge creation with four components; socialisation, externalisation, combination and internationalisation. They predict that the internal knowledge creation process will mediate the relationship between EO and firm performance by operating on them independently and together. Nonaka (1994:14) defines socialisation as the generation of new tacit knowledge through social interactions, externalisation as the conversion of tacit knowledge into explicit knowledge that can be recorded and archived, conversion as converting available explicit knowledge with others into more complex forms and internationalisation as absorbing explicit knowledge to develop tacit knowledge by individuals. These four dimensions of knowledge creation form the core of Li *et al.'s* (2009) conceptual framework. Despite investigating the mediating role of each of the four knowledge creation processes, only the overall mediation of knowledge creation in its aggregate form is empirically validated, meaning that these dimensions must interact to result in performance.

Turning attention to knowledge creation processes outside organisation boundaries, Gupta and Moesel (2008) examine the mediating role of supplier-knowledge-creation (SKC) and customer-knowledge-creation (CKC) in the EO-performance relationship. Eisenhardt and Santos' (2002) emerging knowledge-based view provides the theoretical framework for their research. Given that new knowledge is mostly available outside the firm's boundaries and the relationships a firm has with its suppliers and customers are usually its most important relationships, they examine how knowledge generated through them is the pathway through which EO translates into performance outcomes. Their study shows that knowledge creation through key customer relationships has a stronger role than knowledge creation through the key supplier relationships in achieving performance consequences with EO.

In conclusion, few EO studies that have examined mediators offer useful guidance as to how EO is converted into firm performance or other performance outcomes. Mediation effects have simply not been well studied in the EO literature, which creates a gap in the research (Gupta & Gupta, 2015:82). It seems that, in the absence of mediation studies, theoretical logic for how and why EO leads to superior performance becomes mere conjecture. Without adequate attention to mediation effects, EO researches remain vulnerable to accusation of being atheoretical and

built largely on shaky conceptual foundations (Edmond & Wiklund, 2010:142). Future theoretical work that catalogues and validates intervening mechanisms underlying the performance implications of EO would be helpful to advance EO research.

2.6 MEASURING ENTREPRENEURIAL ORIENTATION

Measurement of a construct can impact its research outcomes and theory development. The measurement of EO is largely informed by the conceptual perspectives presented by Miller (1983), Covin and Slevin (1989) and Lumpkin and Dess (1996). Discussions of EO measurement have been centred on its dimensions as well (Covin *et al.,* 2006:57; Kreiser, Marino & Weiver, 2002:71) along with the debate on whether particular conceptions of EO imply the need to use or avoid the use of specific modelling techniques. This section explains the approaches by which constructs are measured (either as formative or reflective measures) and how they are specified (first order and second order). These classifications are used to contextualise the measurement of EO.

2.6.1 Formative and Reflective Measurement Models

A fundamental point of discussion within the EO literature considers whether it is a latent construct that is most appropriately assessed using formative measurement modelling or reflective measurement modelling (Covin *et al.,* 2006:72; Lyon, Lumpkin & Dess, 2000:1055). Formative measurement models employ “explanatory combinations of indicators” as the basis for creating latent constructs (Fornell & Bookstein, 1982:292). In other words, in formative measurement modelling, the latent construct is modelled as being produced by its measures. In contrast, reflective measurement models assume that underlying factors give rise to something that is observed. In reflective measurement modelling the latent construct is modelled as producing its measures (see Grason, 2016:18). George and Marino (2011:989) suggest that the continued accumulation of knowledge in the field is best facilitated by conceptualising EO as a reflective model. Therefore, this study will employ a measure that reflects the entrepreneurial orientation of SMMEs and attempts to assess their firm level entrepreneurial behaviour and intensity in the South African context.

2.6.2 First-Order and Second-Order Models

Both reflective and formative measurement models can be specified as first-order or higher-order models. First-order measurement models specify relationships between one dimensional latent construct and its measures. For example, the autonomy scale proposed by Lumpkin *et al.* (2009:47) is based on a first-order reflective measurement model. Higher-order measurement models specify relationships between the levels of multi-dimensional constructs and their measures. For example, the corporate identity measure proposed by Witt and Rode (2005:273) is based on a second-order formative measurement model with causal indicators being used to create the first-order latent variables of corporate culture, design, corporate behaviour and corporate identity. Those latent variables are then used to create the second-order construct of corporate identity. According to Law, Wong & Mobley (1998:741), a construct is multi-dimensional when it consists of inter-related attributes or dimensions and exists in relatively complex or multi-faceted domains. In contrast to a set of inter-related uni-dimensional constructs, the dimensions of a multi-dimensional construct can be conceptualised under an overall abstraction and it is theoretically meaningful and parsimonious to use this overall abstraction as a representation of the dimensions.

2.6.3 Entrepreneurial Orientation Measurement Models

Against this background, Covin and Wales (2012:883) state that EO can be viewed as a second-order multi-dimensional construct with three dimensions based on Miller's (1983) model or a first-order multi-dimensional construct with five dimensions based on Lumpkin and Dess' (1996). However, the matter of a construct's dimensionality is a function of the level of abstraction used to define the construct. Consistent with this observation, EO is described by Covin and Slevin (1989) as a basic uni-dimensional strategic orientation.

Further, it could be assumed that EO as a construct inherently favours a formative or reflective measurement, but this does not seem to be the case. According to Wilcox, Howell and Breivik (2008:1220), although a given research situation or research culture may subscribe to either a formative or reflective measurement, constructs themselves posited under a realist philosophy of science as existing

apart from their measurement are neither formative nor reflective. Since EO represents a theoretical construct, which Miller (1983), together with Lumpkin and Dess (1996:136), argue as captures the process of entrepreneurship, the concept of EO exists logically apart from its measurement. Hence, it would be erroneous to claim that EO is inherently either a formative or reflective construct. In other words, there are only formative and reflective measurement models and EO can be measured through either approach.

Covin and Wales (2012:684) elaborate on the issue of EO measurement and the challenges and considerations associated with formative and reflective models. They present four EO measurement models; the Miller/Covin and Slevin (1989) EO scale; an alternative first-order reflective EO corresponding to Miller's (1983) composite view, the Hughes and Morgan (2007) EO scale; and a "Type II" (mixed model) second-order formative EO scale (representing a reflective first-order, formative second-order). Since the present study assumes a multi-dimensional conceptual approach to EO, and favours a reflective measurement model as all measured variables are a sample of possible indicators of entrepreneurial behaviour, the Hughes and Morgan (2007) EO scale is appropriate.

2.7 CHAPTER SUMMARY

Summarising the discussion on EO, one would gather that this construct is filling an important gap in the literature; hence it remains relevant in the scholarly conversation as regards firm-level entrepreneurship. Covin and Lumpkin (2011:861) make three observations that direct attention toward this conclusion. They reiterate that EO represents what it means for a firm to be entrepreneurial (Miller, 1983; Lumpkin & Dess, 1996; Miller, 2011:874) and have argued for the importance of its dimensions in explaining the performance of entrepreneurial firms (Lumpkin, 2011:4). Indeed, EO was initially proposed as a construct that theoretically captures those factors that are either requisite (Miller, 1983) or relevant (Lumpkin & Dess, 1996) to labelling a firm as entrepreneurial. Significantly EO positions entrepreneurship not merely as a discrete act that may or may not occur within firms but as a firm characteristic. It reinforces the notion of entrepreneurship as a firm level behaviour (Covin & Slevin, 1991:10), a phenomenon which was a distinct departure from prior theories but is now being explicated in contemporary EO

research (Anderson, Kreiser, Kuratko, Hornsby & Eshima, 2015:1583). As the EO construct is increasingly being accepted theoretically, entrepreneurship is becoming regarded as more than a possible sub-unit activity and rather an overall strategic posture.

Notably, evolutionary theorists and strategic management scholars recognise the importance of an entrepreneurial strategic posture to the sustenance of firms. In an era when product life cycles are shortening frequently, industry boundaries are continually being transformed and competitive advantages are characteristically unstable, EO has proven to be a useful construct for the purpose of understanding why and how some firms are able to renew themselves regularly through new growth strategies (Kantur, 2016:24) and under different environmental conditions (Kreiser & Davis, 2010:46).

Secondly, EO fills an important gap because it exists as a continual variable or set of variables represented by one or more dimensions on which all firms can be plotted. The continual nature of EO's dimension or dimensions, depending on the conceptualisation of the construct adopted, enables researchers to theorise about the level(s) of entrepreneurship manifested by a firm: the intensity of entrepreneurial activity. This is important because the specific acts of entrepreneurship observed in practice (such as corporate acquisition of external start-ups and internal corporate venturing) can vary considerably from firm to firm, making meaningful comparisons of entrepreneurship levels across firms impossible. Therefore, the existence of EO provides scholars with a common metric or set of metrics through which overall entrepreneurship levels can be assessed.

Finally, EO is a valuable construct for the scholarly conversation on firm level entrepreneurship because it occupies a conceptual space that is distinct from other entrepreneurial phenomena. It is noteworthy that EO is neither a label for a firm's entrepreneurial climate or culture nor a singular specific act of entrepreneurship (such as launching a new product or making a corporate venture capital investment). Rather, the construct is a representation of behaviours that is shared by firms that possess the theoretical test of exhibiting entrepreneurship.

CHAPTER 3
THE ENVIRONMENT AND SMALL BUSINESSES IN SOUTH AFRICA

3.1 INTRODUCTION

The business environment has been the subject of recurrent interest in entrepreneurship and management research. Covin and Slevin (1989:75; 1991:11), Zahra and Garvis (2000:469), Miller (2011:882), Wales *et al.* (2013:367), and Gupta and Batra (2016:664) confirm the role of a firm's external environment in entrepreneurial outcomes. The external environment captures those forces and elements beyond the firm's boundaries that affect, and are affected by, its actions. It encompasses the economic, social, cultural, political, legal and technological forces that shape business operation. Lumpkin (1996:135), Casillas, Moreno and Barbero (2010:31), along with Wales (2016:8) demonstrate the relationship between environmental variables and entrepreneurial performance. While some authors (Gupta & Gupta, 2015; Kellermans, Walter, Crook, Kemmerer & Narayanan, 2016) draw from the resource exchange models to examine the various environmental conditions that stimulate or impede entrepreneurial venturing, others (Cuervo, 2005; Klapper, Lewin & Delgado, 2011) consider the impact of fiscal and regulatory environment on entrepreneurial activity, noting the influence of political and legal forces on the prevalence and success of new ventures. Environment-centred theories, such as the population ecology perspective advanced by Hannan and Freeman (1989), have been used to explain creation of new ventures and their survival. Industry structure variables have likewise been shown to affect the success of new ventures and an array of studies, utilising diverse methods and models, has demonstrated that the external environment affects entrepreneurial outcomes. The role of the external environment has been considered by Miller (1983:770), Covin and Slevin (1989:75; 1991:7) and Lumpkin and Dess (1996:135) whilst concurrently emphasising entrepreneurship as a firm-level phenomenon.

With regard to entrepreneurial orientation (EO), Zahra and Covin (1995:43), Zahra and Bogner (2000:135), as well as Lumpkin and Dess (2001:429) validate the

functionality of environmental variables empirically as they concern the relationship between EO and performance. Studies have shown that this relationship is contingent on the environmental context in which the firm is operating and the uniqueness of its dimensions (Kreiser & Davis, 2010:39; Gupta & Gupta, 2015:429). Considering contingency theory, it has been suggested that, to maintain performance, organisational processes must fit the environment in which the firm operates (Kabadayi, Eyuboglu & Thomas, 2007:195; Eesley, Hsu & Roberts, 2014:1798). Indeed, Donaldson (2001) and Eesley *et al.* (2014) contend that managerial decisions and practices need to be aligned with environmental demands to derive performance benefits; specifically, EO (Shirokova *et al.,* 2016). Covin and Lumpkin (2011:885) argue that EO may not be relevant in every environment and so researchers need to examine environmental effects to explain the relationship between EO and performance outcomes in organisations. Therefore, an enquiry of the extent, and under what conditions EO is effective, is important to obtain a fit between the firm's strategic posture and other constructs of interest (Stam & Elfring, 2008:97; Rauch *et al.,* 2009:781).

An array of environmental contingencies has been considered in EO studies; environmental dynamism (Wiklund & Shepherd, 2005:71; Perez-Lufio, Wiklund & Cabrera, 2011:555; Engelen, Neumann & Schmidt, 2016), environmental hostility (Zahra & Covin, 1995:43; Frese, Brantjes & Hoorn, 2002:259; Dimitratos, Lioukas & Carter, 2004:19; Moreno & Cassillas, 2008:507), environmental munificence (Caruana, Ewing & Ramaseshan, 2002:43; Pearce, Fritz & Davis, 2009:219), environmental complexity (Frese, Brantjes & Hoorn, 2002:259), industry development stage (Lumpkin & Dess, 2001:429), environmental turbulence (Naman & Slevin, 1993:137; Auh & Mengunic, 2005:1652) and technology turbulence (Zhou, Yim & Tse, 2005:42; Tsai & Yang, 2014:343). According to Covin and Lumpkin (2011), although these variables create a congenial task environment for actualising EO, key knowledge voids remain regarding environmental effects on the link between EO and firm performance, prompting researchers to stress that continued efforts along these lines are valuable to gain a deeper understanding of EO and its outcome (Rauch *et al.,* 2009:780; Gupta & Batra, 2016:661). Furthermore, Rosenbusch, Rauch and Bausch (2013:635) submit that most studies in the EO domain have been limited by the number of environmental variables considered,

therefore the precise means by which firms can outmanoeuvre multiple environmental forces to enhance their performance remains unclear. While organisational environment can be classified in a myriad of ways, Sharfman and Dean (1991:683), Wales and Mousa (2016:18) and Dean (2016) distinguish between environmental objects as entities with which the firm interacts and attributes as characteristics such as Aldrich's (1979) six dimensions aggregated into Dess and Beard's (1984:55) three facets: munificence, dynamism and complexity.

According to Richard, Murthi and Ismail (2007:1213) empirical examinations have primarily focused on environmental attributes, with most studies citing Dess and Beard's (1984:55) three-dimensional framework. Confronted with considerable amounts of seemingly conflicting information about environmental forces, selective attention and simplification processes force managers to concentrate much of their external scanning on cues and signals related to two entities in their environment, namely, customers and competitors (Yadav, Prabhu & Chandy, 2007:84). It is noted that when firms turn their attention away from rivals and buyers, they risk becoming irrelevant in the marketplace. Yet, limited research investigates such contingencies in emerging economies (Peng, Wang & Jiang, 2008:920), and more recent reviews (Wales *et al.,* 2013:365; Gupta & Batra, 2016:664) show that studies on the environment predominate in the United States and Western Europe. Based on the information available in this study much less is being done in the South African context where opacity of information regarding customers and rivals imposes high costs on firms. Therefore, responding to Rosenbusch *et al.'s* (2013:633) calls for EO studies to consider the multi-dimensional nature of the environment, this study investigates how two variables in the task environment; dynamism and hostility which can reflect the business environment in South Africa, align with the dimensions of EO amongst SMMEs.

This chapter addresses the concepts of the firm's external environment and small businesses in two parts. The first section delves into the concept of the environment commencing with relevant theories that capture the environment expatiating on its role in the performance of firms. It discusses how the environment has featured in relation to entrepreneurship and performance or growth in models developed by previous researchers and goes further to elaborate on the bi-directional nature of

the environment and entrepreneurial posture. Additionally, it considers the EO-performance relationship and moderating roles of environmental dynamism and hostility. The second section explains the concept of the small business as it identifies definations of a small business both from global and local perspectives. It elaborates on small business in South Africa, as the discussion includes the significance of small enterprises and the relevance of SMMEs to the local economy. The state of entrepreneurship as well as the current business environment in South Africa is brought into the spotlight in terms of competitiveness and the ease of doing business. In addition, the environmental challenges of small businesses in South Africa is outlined and discussed in this chapter.

3.2 FOUNDATIONAL THEORIES TO THE FIRM AND ENVIRONMENT

Theories have been advanced in the field of entrepreneurship based largely on the subject of interest. As regards the environment and entrepreneurial performance the literature shows that most studies have not been restricted to a particular theoretical framework (Rauch *et al.,* 2009; Edelman, Manolva & Brush, 2009; Wales *et al.,* 2013:359; Kellermann, Walter, Crook, Kemmerer & Narayanan, 2016:26). They have borrowed theories from an array of disciplines to explain phenomena in entrepreneurship. In entrepreneurship research, increasing attention has been paid to the management of resources which enable small businesses to respond to opportunities and threats in the environment to stay competitive and ensure firm survival. Such studies are largely founded on the resource-based view and the dynamic capability perspective; which have been useful in the entrepreneurship and strategy fields given the central role played by the availability of resources and need for exploitable opportunities to ensure venture success (Bhide, 2000).

Therefore, to enhance the understanding of the environment and entrepreneurial behaviour this section reviews theories that relate to the external environment of the firm and its internal strategic posture. They are the resource-based view, dynamic capability perspective, institutional theory and the network theory. The aforementioned four theories may be considered the bedrock of this study, although their respective contribution varies taking into account the various theoretical components of the postulated models.

3.2.1 Resource-Based View

The resource-based view (RBV) is one of the most influential theories in management science (Kellermann *et al.,* 2016:26). The RBV addresses the accumulation of valuable, rare, inimitable and non-substitutable resources and is the basis of enterprise competitiveness and economic rent (Lin & Wu, 2014:407; Katkalo, Pitelis & Teece, 2010:1175). Kellermann *et al.* (2016:28) reiterate that the central assertion within the RBV is that organisational advantages are enhanced to the extent that organisations possess strategic resources (Barney, 2001) and recent meta-analysis of empirical evidence support this (Crook, Todd, Combs, Woehr & Ketchen, 2011:443). According to West and Noel (2009:3) it attempts to identify fundamental factors within organisations that create sustainable competitive advantage for both start-up performance and longer-term growth. The resource-based view, deepens our understanding on how firms combine and manage resources to create competitive advantage. It considers that an organisation's competitive advantage arises from managerial or entrepreneurial knowledge which is critical to understand how organisations attain growth and competitive position (West & Noel, 2009:4). They elaborate further that management has a crucial responsibility of identifying, evaluating, distributing and managing resources in line with perceived entrepreneurial opportunities. The resource-based approach is therefore critical in aiding an organisation to learn to develop structures and systems to transform itself to become more adaptive and responsive to changes and jolts in the environment (Wang & Ellinger, 2011:515).

Furthermore, since the resource-based view is concerned about explaining the differences in performance among firms based on the resources available to them Barney (2001:54) presents resources as both tangible and intangible assets firms use in implementing their strategies. Ireland (2007:7) and Katkalo *et al.* (2010:1175) emphasise that to yield competitive advantages, resources must be valuable, rare, inimitable, and not easily substitutable by competitors. Katkalo *et al.* (2010:1176) identify several strategic resources that include intellectual property (patents/copy) rights, brand name, reputations, process know-how, customer relationships and knowledge possessed by groups such as skilled employees or management that could lead to competitive advantages.

It has been suggested that competitive advantages rely on the resource combination a firm creates or acquires to implement their strategy (Barney & Hesterly, 2006:131; Kraaijenbrik, Spender & Groen, 2010:359). Using the RBV, researchers have established a link between resources and differential performance among firms (Wu & Chiu, 2015:25; Campbell & Park, 2017:302). This has compelled entrepreneurship scholars to put more emphasis on particular types of resources to examine and identify differential firm performance on firms' capacities to identify and exploit entrepreneurial opportunities (Ireland *et al.,* 2003:972). Barney and Arikan (2005:136) affirm "idiosyncratic resources have stronger influence on performance than industrial characteristics", although the relative firm size effect can vary from one industry to another. While it is evident that idiosyncratic resources are likely to create sustainable competitive advantages, this is when such resources are managed strategically. They further explain that resources are managed strategically when their deployment facilitates simultaneous opportunity-seeking and advantage-seeking activities which are dimensions of strategic entrepreneurship.

Despite long-standing application of the resource-based view in strategic management and entrepreneurship research, with the ongoing environmental changes, the resource-based view is considered inadequate to explain differential performance among firms (Lin & Wu, 2014). According to Kraaijenbrik *et al.* (2010), the resource-based view is a static theory that is not able to cope with the environmental changes taking place at a fast pace. In this case, the next section reviews the dynamic capabilities' theory that is considered more relevant in explaining differential performance amongst firms in a competitive and dynamic environment.

3.2.2 Dynamic Capabilities' Theory

The dynamic capability theory may be considered as an extension of the resource-based view. Whilst the resource-based view of the firm emphasises sustainable competitive advantage, the dynamic capabilities view, in contrast, focuses more on the issue of competitive survival in response to rapidly changing contemporary business conditions.

Chien and Tsei (2012:435) describe the term “dynamic” as the capacity to regenerate competencies that are in line with changes in the environment, while the term “capability relates to the adaptation, integration and reconfiguration of both internal and external organisational resources in response to the changing environment. Teece (2012:1395) elaborates further, stating that these kinds of capabilities determine the speed and degree to which the organisation’s resources can be synchronised appropriately with the requirements and opportunities of the business environment in order to generate sustained superior returns.

According to Furrer *et al.* (2008) the most seminal papers on dynamic capabilities are Eisenhardt and Martin (2000), Helfat (1997), Teece *et al.* (1997), Zollo and Winter (2002) and are among the most frequently cited in the broader array of strategic management publications. These authors describe dynamic capabilities as the firm’s ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments (Teece *et al.,* 1997:516). Simply put, firms need to be nimble to manage change. Nimbleness and agility can be considered as the characteristics that firms require to integrate, reconfigure, gain and release resources to match and create market change (Eisenhardt & Martin, 2000). Consequently, this shows that a firm’s responsiveness based on its resource stock in a turbulent environment is associated with competitive advantage. Therefore, dynamic capabilities are of inherent strategic relevance to a firm.

Subsequent studies on dynamic capabilities have refined and extended the definition (Katkalo *et al.,* 2010:1177; Teece, 2012:1395; Di Stefano, Peteraf & Verona, 2010:1188; Vogel & Guttel, 2013:426). Despite minor deviations in different definitions; all insist that the firm’s ability to alter its resource base must match with environmental change in order to retain competitiveness. For example, Helfat *et al.* (2007:4), refined the prior definition by defining dynamic capability as “the capacity of a firm to purposefully create, extend, and modify its resource base” to match with the pace of environmental change. Accordingly, dynamic capabilities may sometimes be rooted in performing different tasks that alter the resource base, such as new product development, networking or alliance formation, creative managerial and entrepreneurial acts such as pioneering new markets (Kay, 2010:1211; Katkalo *et al.,* 2010:1178).

Consistent with the same argument, Helfat and Peteraf (2009) and Teece (2012:1395) make reference to the firm's capacity to alter its resource base in the face of environmental change and influence economic profitability. There seems to be consensus that superior dynamic capabilities enable firms to adapt quickly and effectively to a changing business environment which consequently creates a stream of competitive advantages over time.

The importance of dynamic capabilities to firm performance prompts the need to understand how a firm's structure and its resource base interact within a dynamic environment. It is from this context that effort is being directed toward dynamic capabilities, by relating firm processes of identifying and exploiting business opportunities and simultaneously aligning resources to cope with the dynamic nature of business opportunities (Lin & Wu, 2014:411; Helfat & Peteraf, 2015:844). Within the context of this study, the ability of a firm to identify market opportunities and act entrepreneurially through pro-active and innovative behaviour could depend on its flexibility to a changing environment. This relates to the firm's capacity to learn and apply knowledge to identify, evaluate, and convert these opportunities to sustain growth. The evaluation process will entail critically analysing the firm's resource alternatives from which the entrepreneurial manager will chose the most feasible option.

3.2.3 Institutional Theory

According to Scott (2011:48) institutions are social structures that have attained a high degree of resilience. They are composed of cultural, cognitive, normative and regulative elements that together with associated activities and resources provide stability and meaning to social life. The institutional theory examines the need to adopt structures, processes, policies and/or procedures due to the pressure from co-existing institutions. These external forces could function both as constraints and opportunities which could alter the firm's competitive position (Bruton *et al.,* 2010). An institutional environment is defined as the stable rules, social standards and cognitive structures in society that guide, favour or restrict business activity (Gomez-Haro *et al.,* 2011:1680). These institutional arrangements, such as government policy, legal and financial systems, have an influence on organisational behaviour as they affect company decisions and their strategy-making posture (Lim, Morse,

Mithchell & Seawright, 2010; Peng, Wang & Jiang, 2008). Faced with such an environment, organisations are compelled to respond accepting and complying with the imposed rules while at the same time attempting to influence and control these same institutions that try to control them (Gomez-Haro *et al.,* 2011).

The literature presents three dimensions of the institutional environment (Manolova, Eunni & Gyoshev, 2008; Urbano & Alvarez, 2014) which have been used widely in organisational research, namely, regulatory, normative and cognitive institutional environment. According to Manolova *et al.* (2008:205), “regulatory institutions” refer to formally codified, enacted and enforced structure of laws in community, society or nation. “Normative institutions” are less formal and are typically manifested in standards and commercial conventions such as those established by professional and trade associations and business groups. “Cognitive institutions” refer to the axiomatic beliefs about the expected standards of behaviour that are specific to culture which are typically learnt through social interaction by living or growing up in a community or society.

Urbano and Alvreza (2014:703) refer to these dimensions in normative and cognitive terms that are different than those originally provided. They define cognitive dimension as the knowledge and skills possessed by the people in a country pertaining to establishing and operating a new business while the normative dimensions relate to “the degree to which a country’s residents admire entrepreneurial activity and value creative and innovative thinking”.

Previously, researchers paid more attention to the regulatory dimension of the institutional environment as regards its influence on entrepreneurship. Recent research shows that other factors that are related to a manager’s influence from cognitive and normative variables (for example, culture, tradition, history, cognitive conceptions) should be incorporated also as they affect the level and success of entrepreneurship (Capelleras, Mole, Green & Storey, 2008; Gomez-Haro *et al.,* 2001; Lim *et al.,* 2010).

Institutions can be formal (for example, political and economic rules and contracts) or informal (for example, behavioural values, norms and attitudes, codes of conduct and convictions) (Urbano & Turro, 2013). In this respect, the institutional theory is

critical to entrepreneurship research as they are the embodiments of the set of rules that articulate and organise the economic, social and political interactions between individual and social groups with consequences for business activity and economic development (Bruton *et al.,* 2010). Furthermore, the institutional environment influences the development of entrepreneurship as it creates conditions that entrepreneurs must navigate and that policy makers can address. In the absence of an established institutional foundation the entrepreneurship-specific conditions cannot function effectively (Kelly *et al.,* 2014:4). An institutional environment also determines the process of gaining cognitive and socio-political legitimacy which substantially aids entrepreneurial organisations to overcome the liabilities of newness and smallness and to increase their survival prospects (Manolova *et al.,* 2008:205; Sambharya & Musteen, 2014:314).

Although the institutional theory has been used substantially in the field of traditional entrepreneurship (Bruton *et al.,* 2010; Guerrero & Urbano, 2012; Thornton *et al.,* 2011; Welter & Smallbone, 2011) very limited research on EO has been conducted based on this theory (Gomez-Haro *et al.,* 2011). However, recent research shows that the relationship between institutional environment and EO is distinct; both the normative and cognitive dimensions of the institutional environment influence an organisation's EO, while the regulatory dimension influences positively the type of entrepreneurial activity carried out (Gomez-Haro *et al.,* 2011:678). This study is related to institutional theory as all aspects of the theory; regulatory, cognitive and normative institutional environments have a bearing on EO and the growth of SMMEs.

3.2.4 Network Theory

According to Mette (2010:16) networking is a basic feature of entrepreneurial management and has been found to be an active way of identifying opportunities. It involves firms with customers, suppliers and competitors amongst others and often extends across industry, geographic, political and cultural boundaries. In the dynamic and competitive environment where the future is less predictable due to uncertainty, networking has increasingly become important to firms in order to share the risk imposed by the environment. The literature points out the advantages that result from networking which include faster market penetration, obtaining support

and resources for survival (such as access to information, technologies and valuable competitive knowledge) that enhance innovation capability (Dickson & Weaver, 2011:126; Welter & Smallbone, 2011:112; Nieto & Santamaria, 2010:47; Semrau & Werner, 2012:159). In this view, network theory attempts to explain the relationships a firm has with other firms and stakeholders, and how these relationships influence a firm's behaviour and competitive capabilities.

Networking is particularly relevant in the growth and survival of small firms as it applies to this study, since, in most cases, they have limited resources (Kropp & Zolin, 2005:1; Nieto & Santamaria, 2010:45; Verhees & Meulenberg, 2004:137) to implement strategies effectively in response to a competitive environment (Dickson & Weaver, 2011:126; Welter & Smallbone, 2011:112). Nieto and Santamaria (2010:62) posit that networks allow firms to gain access to resources they need and learn new capabilities from networking partners that boost technological capabilities and innovation. McEvily and Zaheer (1999:1152) share similar views that the greatest value of networks for entrepreneurial firms is the access of resources and capabilities needed to compete effectively in the market place. In a competitive environment, effective social capital is crucial to firm survival and it focuses on internal and external resources. External social capital is essential for acquiring new knowledge that adds value to firms and the internal social capital is essential in transforming the knowledge gained that supports the exploitation of entrepreneurial opportunities by creating and successfully using competitive advantage.

The four theories discussed: the resource-based view; dynamic capability; institutional, and network theories, present the interrelationship between a firm's external environment as a source of its competitive advantage and performance. Based on the resource-based view and dynamic capability, it is clear that sustainable competitive advantage requires firms to own or control a challenging environment to replicate dynamic capabilities or resources (Katkalo *et al.,* 2010:1175). While institutional theory emphasises the regulatory, normative and cognitive institutions which constrain the operations of the organisation through rules, standards and cognitive structures within the society, networking theory shows that resource-constrained firms can access strategic resources and other capability from networking partners to enhance the firm's capability and be able to

withstand challenges in a dynamic environment (Nieto & Santamaria, 2010:63). Critically examining these four theories, they emphasise different sources of competitive advantages required for firms to cope with fast-changing environmental conditions.

Understanding the nature of the contemporary business environment, for small firms to cope at the present pace of environmental change will require efficient systems that continually provide new market information which is quickly internalised and utilised in response to changes. While strategy has been proposed to be relevant mainly to a dynamic environment, this study considers that entrepreneurial orientation could add value as a strategic posture in both a dynamic and a hostile environment. It seeks to shed light on how firms perform with respect to growth in employment in response to market opportunities and current or latent customer needs as reflected by the environment, thereby remaining competitive.

3.3 CONCEPTUAL MODELS OF ENVIRONMENT, ENTREPRENEURSHIP AND FIRM PERFORMANCE

Based on existing theories conceptual models about entrepreneurship have been developed by scholars. These models indicate the environment as influencing entrepreneurial outcomes. The literature reveals exploratory work on entrepreneurship, resulting in models that focus on internally generated innovations within existing organisations which vary in a number of respects. This study considers the following models:

- a strategic management model by Guth and Ginsberg (1990)
- a model of corporate entrepreneurship by Zahra (1991)
- a conceptual model of entrepreneurial posture by Covin and Slevin (1991)
- a conceptual model of entrepreneurial orientation by Lumpkin and Dess (1996)
- a conceptual causal model of EO and growth of SMEs by Moreno and Casillas (2008), and
- a theoretical model of EO-Environment-Structure-Performance relationship by Kreiser and Davis (2010).

As these models are conceptualised from different theoretical perspectives, they bring out pertinent elements of the environment, entrepreneurship and the growth

of firms which enriches this review holistically. Moreover, there is no single model that exclusively captures the interaction between the environment, entrepreneurial orientation and employment growth of businesses. Yet, together they present important precursors, dimensions and outcomes of the role of the environment in entrepreneurship as well as linkages between entrepreneurial behaviour and firm growth. For example, Strategic Management Model by Guth and Gainburg (1990) and Model of Entrepreneurial Posture (Covin & Selevin, 1991) were useful in highlighting the explanatory role of the environment and the models presented by Moreno and Casillas (2008) along with Kreiser and Davis (2010) were useful to show the possible relationships between entrepreneurial orientation and growth. Thus, these models are presented and its relevance to this study described.

3.3.1 Strategic Management Perspective by Guth and Ginsberg (1990)

The model presented in Figure 3.1 by Guth and Ginsberg (1990) provides a framework for integrating entrepreneurship into strategic management of organisations. This model conceptualises entrepreneurship as comprising two types of processes: internal innovation (or venturing through the birth of new businesses with existing organisations) and strategic renewal (or the design of initiatives that lead to the transformation of organisations). The model identifies organisational performance as an outcome of entrepreneurship and presents four antecedents that influence the extent to which entrepreneurship occurs and the ways in which it is manifested, namely: strategic leadership, organisational form, organisational performance, and the external environment.

Laying emphasis on the external environment, it consists of competitive, technological, social and political forces and is indicative of the multiplicity and complexity of the external environment. These factors are considered to have a major influence on entrepreneurial intensity within a corporate organisation. This model reiterates that the impact of major environmental shifts such as deregulation can influence changes in strategy in a non-random way with organisations moving away from a generic strategy towards other strategies that fit with the changing environment; which puts the theory of dynamic capabilities back into perspective.

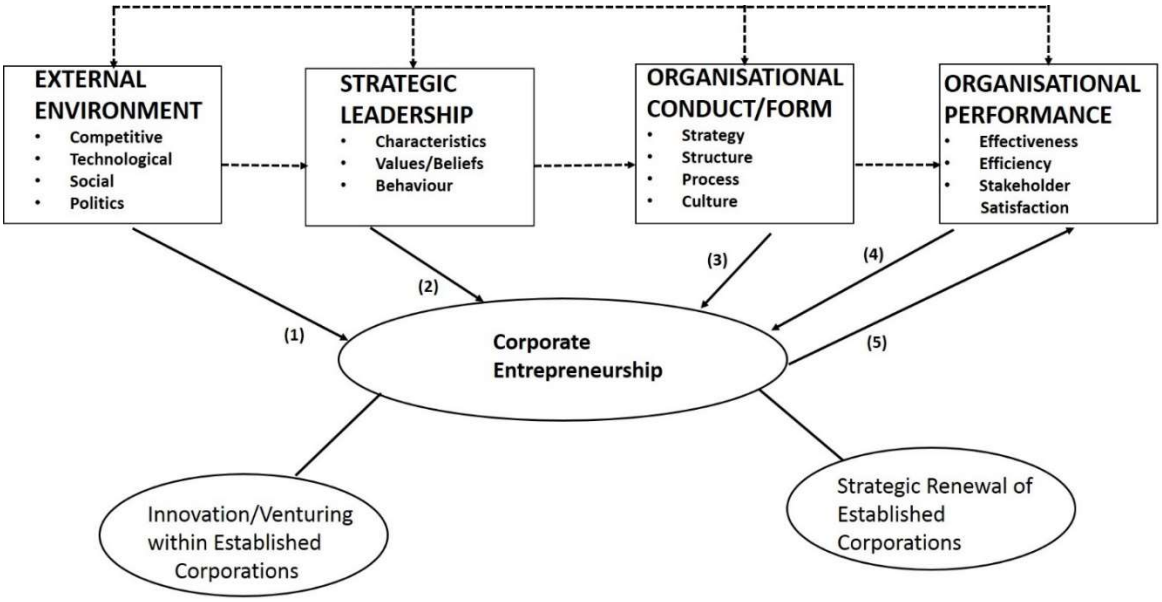

Figure 3.1: A strategic management model

Source Guth and Ginsberg (1990:7)

It emphasises largely the institutional environment and has been empirically validated in the corporate entrepreneurship context (Ireland, Covin & Kuratko; 2009; Gomez-Haro *et al.,* 2011). In this model, it is stressed that industry structure affects opportunities for successful new product development. The model presented by Guth and Ginsberg (1990) is relevant to this study as it illustrates the nature of entrepreneurship and how it occurs; it recognises the external environment (particularly the roles of institutions as an antecedent that intensifies entrepreneurship in organisations) and the link between entrepreneurship and business performance from a broad perspective.

3.3.2 Model of Corporate Entrepreneurship by Zahra (1991)

Zahra's (1991:260) model of predictors and financial outcomes of entrepreneurship (presented in Figure 3.2) posits that a combination of the external environment, strategic and internal organisational variables jointly influence entrepreneurial efforts. The model – which has been empirically tested by Srivastava and Agrawal (2010) – entails the association between entrepreneurship and business performance. According to Zahra (1991:262), organisations innovate and venture in anticipation of, or in response to, their external environment.

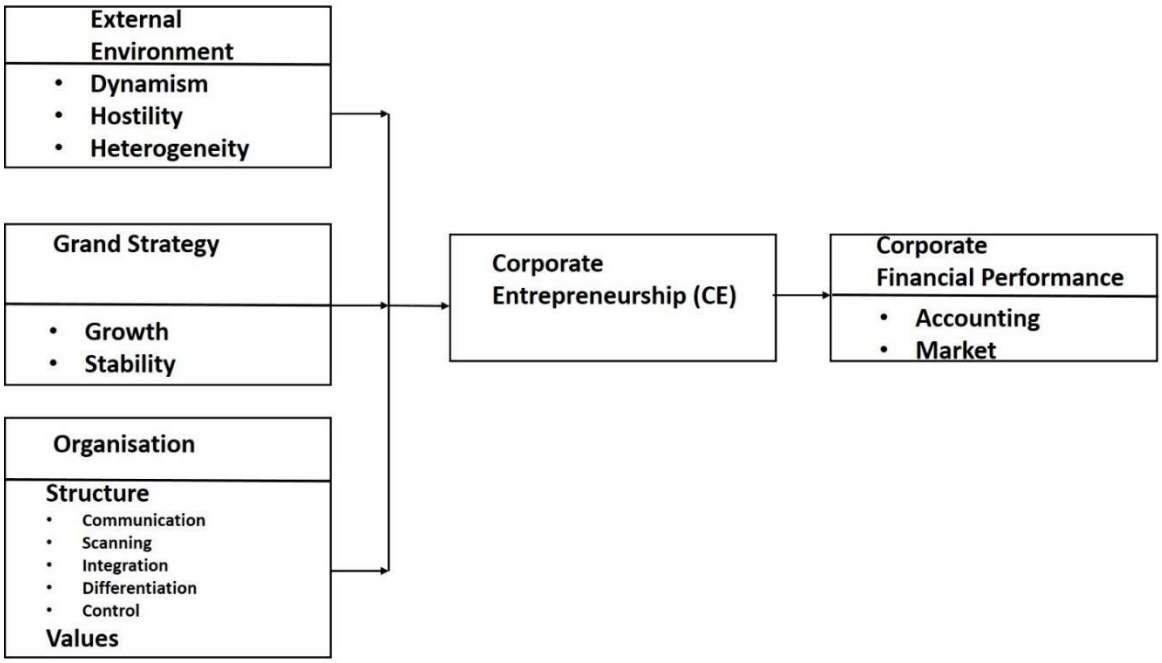

Figure 3.2: A model of predictors and financial outcomes of corporate entrepreneurship

Source Zahra (1991:10)

In this respect the model postulates that the effect of the multiplicity and complexity of the task environment; dynamism, hostility and heterogeneity intensify entrepreneurship. The model goes further to highlight that the more dynamic and hostile the environment, the more firms tend to be entrepreneurial which is consistent with Miller and Friesen (1982), Miller (1983), Covin and Slevin (1989), Zahra and Covin (1995), and Zahra and Garvis (2000). The aforementioned researchers have confirmed the role of hostility in the entrepreneurship and performance relationship. Zahra (2015) elaborates on the role of entrepreneurial hubs in knowledge creation for corporate entrepreneurship, further corroborating the importance of the institutional environment.Zahra's (1991:260) model posits that measures of entrepreneurship are inter-related although each variable may independently influence the phenomenon; only by examining the simultaneous effects can the major precursors of entrepreneurship be reliably understood. Zahra's (1991) model is relevant to this study as it identifies antecedents such as environmental dynamism and hostility as factors that can be associated with entrepreneurship. It is notewothy that this model as well as Guth and Gingsberg

(1990) emphasises on performance and not employment growth which is the focus in this study.

3.3.3 Conceptual Model of Entrepreneurship Posture by Covin and Slevin (1991)

Covin and Slevin's (1991) model of entrepreneurship focuses on entrepreneurial posture (EP) and demonstrates the connection between an organisation's EP and its external environment, strategy and internal factors, and performance. The model presented by Covin and Slevin (1993:23) (Figure 3.3) is an empirically grounded model built around a particular concept and operational definition of EP which views entrepreneurship as a strong commitment to three inter-related components: risk-taking, pro-activeness, and product innovation which are the rudiments of entrepreneurial orientation (Miller, 1983:771).

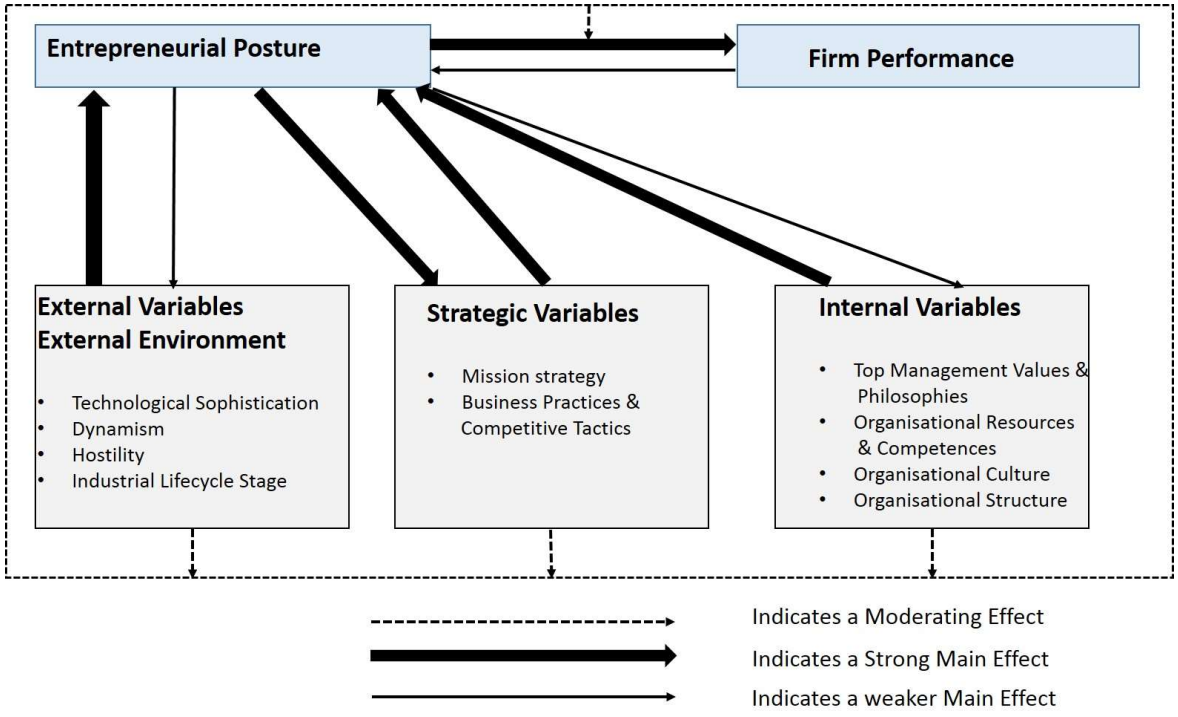

Figure 3.3: A model of entrepreneurial posture

Source: Covin and Slevin (1991:10)

Covin and Slevin's (1991) concept of a firm's EP is a precursor to an earlier definition of entrepreneurship as a strategic posture and the development of a measurement scale for EO in Covin and Slevin (1989). This constitutes a bedrock for the uni-dimensional perspective to EO as discussed in Section 2.2.3. Accordingly, they consider entrepreneurial posture as reflected in three types of organisational level behaviours. Firstly, top management risk taking with regard to investment decisions and strategic actions in the fact of uncertainty, secondly the extensiveness and frequency of product innovation and the related tendency toward technological leadership, and thirdly the pioneering nature of the firm as evident in the firm's propensity to aggressively and pro-actively compete with industry rivals (see Covin & Slevin, 1991:10).

The external environment is observed as a key component of this model. It consists of environmental technological sophistication, environmental dynamism, environmental hostility and industry life-cycle stage. Its seminal role in entrepreneurship theory has been validated as studies have been conducted which demonstrate the inseparability of the external environment from the entrepreneurial process. Furthermore, Covin and Slevin's (1991) model highlights the bi-directional nature of the relationship between the entrepreneurial posture and the external environment. Although a two-way relationship is acknowledged, it emphasises the stronger effect the environment has on EP as compared to the effect of EP on the environment. Covin and Slevin (1991:12) outline how EP may relate to several key environmental variables with eight propositions:

1. EP is positively related to environmental technological sophistication.
2. EP is more positively related to firm performance among firms in technologically sophisticated environment than among firms in technologically unsophisticated environment.
3. EP is positively related to environmental dynamism.
4. EP is more positively related to firm performance among firms in dynamic environment than among firms in stable environment.
5. EP is positively related to environmental hostility.
6. EP is more positively related to firm performance among firms in hostile environment than among firms in benign environment.

7. EP is most common among firms whose industries are in their early life cycle stages, and

8. EP is more positively related to firm performance among firms whose industries are in their early lifecycle stages than among firms whose industries are in their latter life-cycle stages.

In a similar vein this study draws from Covin and Slevin's (1991) model with regards to its objective of investigating the relationship between variables in the environment and the entrepreneurial orientation of small firms where a predominant effect has been indicated.

3.3.4 Conceptual Model of Entrepreneurial Orientation by Lumpkin and Dess (1996)

To clarify the nature of EO and propose a framework for investigating the relationship between EO and firm performance, Lumpkin and Dess (1996) developed the conceptual model shown in Figure 3.4.

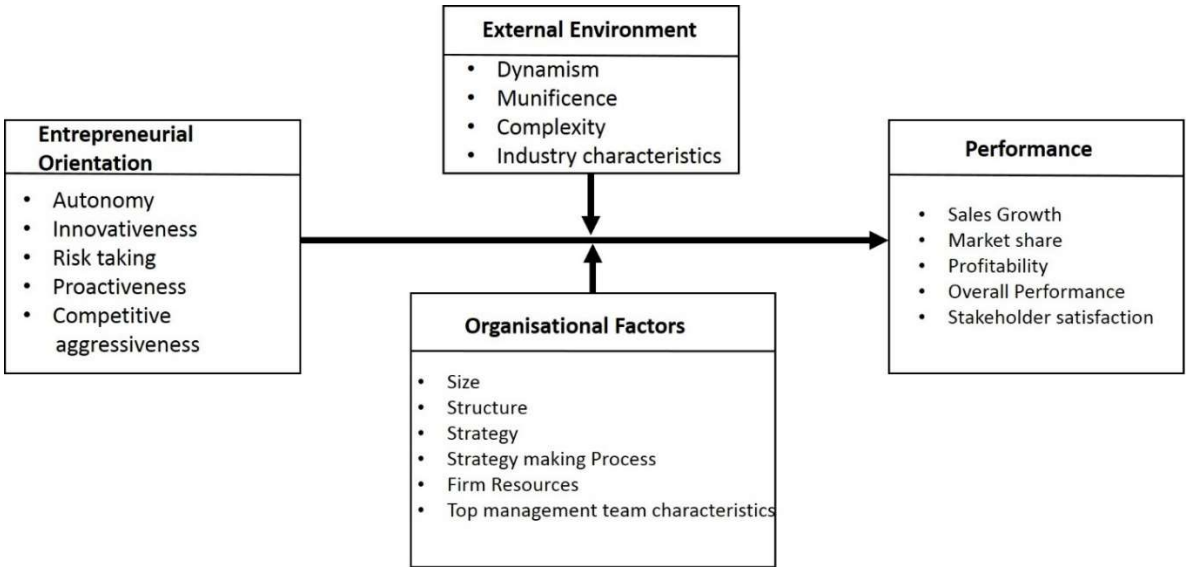

Figure 3.4: A conceptual model of entrepreneurial orientation

Source: Lumpkin and Dess (1996:152)

The model considers EO as a multi-dimensional construct which consists of five key dimensions, namely: innovativeness, pro-activeness, risk-taking, competitive aggressiveness, and autonomy. As discussed in Chapter 2, their model lays emphasis on new entry as the essential act of entrepreneurship and introduces

competitive aggressiveness and autonomy as two additional dimensions which go beyond the original three to further describe the EO domain. In fact, they are acknowledged as pioneers of the multi-dimensional perspective in EO studies (Hughes & Morgan, 2007; Basso, Fayolle & Bouchard, 2009; Covin & Wales, 2012).

Lumpkin and Dess (1996:136) refer to EO as the processes, practices and decision-making tasks that facilitate creation of a new venture and entering into new markets with new products and services and it emerges from a strategic choice perspective. The model articulates that:

- All five factors (innovativeness, pro-activeness, risk-taking, competitive aggressiveness, and autonomy) may be present when an organisation engages a new entry, although successful new entry may also be attained when only some of these factors, and not all, are operating.
- The extent to which each of these factors is useful for predicting the nature and success of any new undertaking may be dependent on external factors including characteristics and task environment variables (dynamism, munificence and complexity).
- Since the dimensions of EO may vary independently depending on the environmental and organisational context, its concept of EO is fundamentally different from prior studies (Miller, 1983; Covin & Slevin, 1989;) which suggests that the dimensions of EO must co-vary (Basso *et al.,* 2009:318).

It is noteworthy that Rauch *et al.* (2009), conducted a meta-analysis of 51 EO studies and found the environment as a relevant moderator of the EO-performance relationship. These researchers considered the industry environment as a context moderator of the relationship between EO and performance. The idea that businesses operating in dynamic environments (such as high-technology industries where customer preferences change rapidly) are more likely to benefit from entrepreneurial initiatives was examined. Findings from their study support the argument that businesses in high-technology industries benefit more from pursuing EO given the dynamism and rapid technology change in this industry, thus confirming the role of the industry environment.

Furthermore, Rauch *et al.* (2009:780), elaborate on that aspect of a firm's task environment as dynamism and hostility were shown to moderate the relationship between EO and performance. Although industry and task environment represent different conceptualisation of the firm's environment both represent valuable

moderators as depicted by Lumpkin and Dess's (1996) EO model. As compared to the preceding models, this model is more relevant to the present study given that it is more explicit about EO as a measure of entrepreneurial intensity and it considers the five dimensions being investigated. In addition, it subscribes to the contingency role of dynamism and hostility as shown in the model (Figure 3.4).

3.3.5 Conceptual Model of Entrepreneurial Orientation: Strategy, Environment, Resources and Growth by Moreno and Casillas (2008)

Moreno and Casillas's (2008) study takes the discussion between EO and its performance outcomes further in two distinct ways. Since most empirical studies undertaken have focused largely on firm performance, it examines the singular concept of firm growth and may be useful as a basis in examining employment growth.

As shown in Figure 3.5 it also takes into cognisance the complexity involved in the EO-growth relationship with direct, mediating and moderating relationships involving strategy, environment, development of new product technologies, attention to new needs market and availability of resources. Focusing on the environmental component of the model (Moreno & Casillas, 2008:513) which considers dynamism and hostility, their conceptual models hypothesised that:

- The dynamism and hostility of the environment will moderate the relationship between EO and growth of the firm in such a way that the firm's EO will have a more intense influence on growth when the firm moves in a dynamic and/or hostile environment.
- The dynamism and hostility of the environment will moderate the relationship between strategy and firm growth such that the use of a prospector strategy will have a more intense influence on growth when the environment is more dynamic and hostile; the development of new product technologies will have a more intense influence on growth when the environment is more dynamic and hostile and the attention to a new needs market will have a more intense influence on growth when the environment is dynamic and hostile.
- There will be a negative relationship between the dynamism and hostility of the environment and the rate of growth.

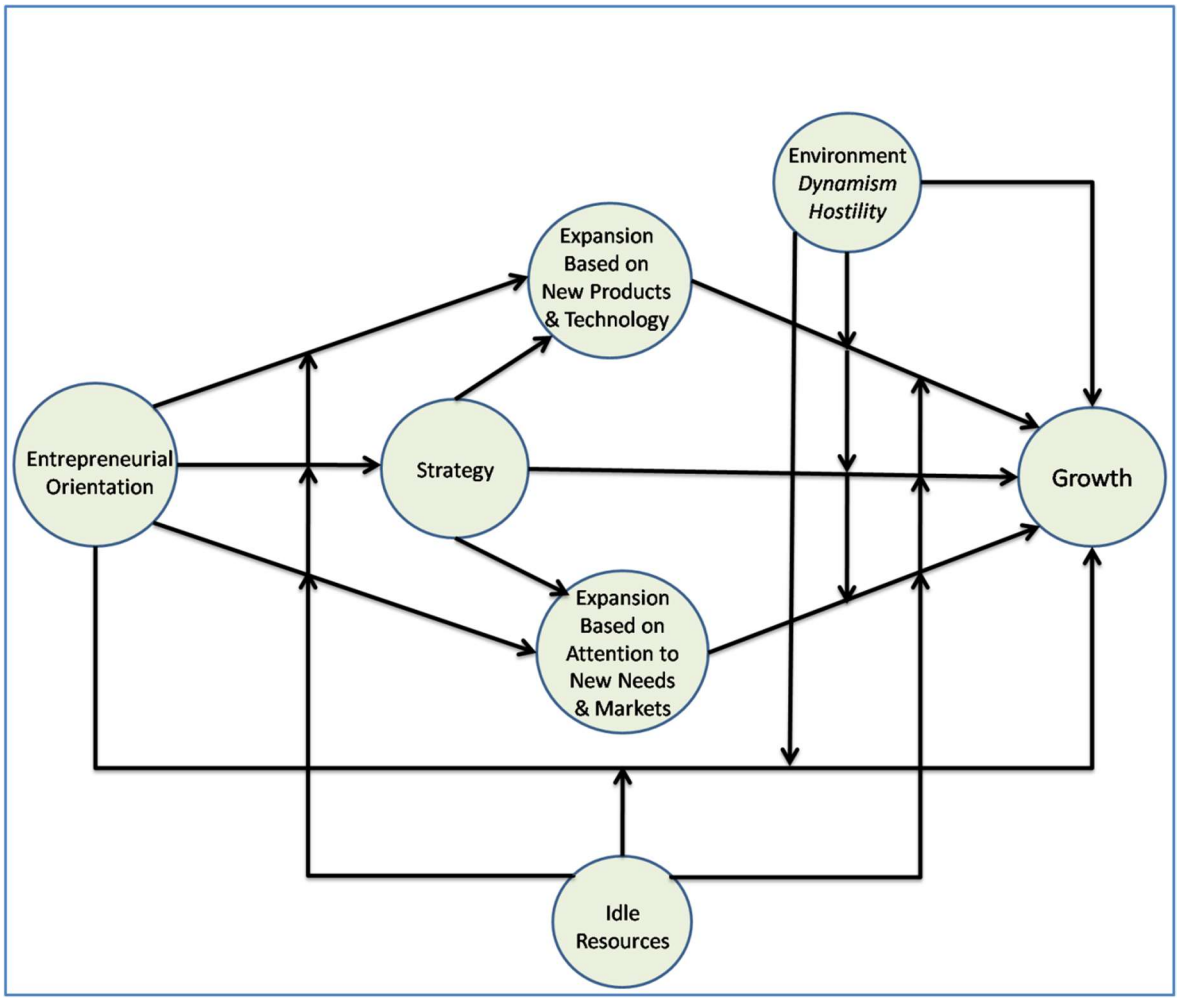

Figure 3.5: A conceptual model of entrepreneurial orientation: strategy, resources and growth

Source: Moreno and Casillas (2008)

Findings from Moreno and Casillas' (2008) empirical study reveal that the **first hypothesis** is not supported as dynamism and hostility do not moderate the EO-growth relationship. The **second hypothesis** is partially confirmed as the relationships are significant in the proposed direction for dynamism and insignificant in the opposed direction for hostility. The **third hypothesis** is supported as a significant negative relationship was found between the environmental variables and the rate of firm growth. Their study showed that the environment does not have a direct moderating effect on EO growth but, when mediated by strategy, dynamism has an influence on the relationship but not hostility. Moreover, both dynamism and hostility of the environment have a direct effect on the growth of SMEs.

3.3.6 Theoretical Model of Entrepreneurial Orientation: Environment-Structure-Performance Relationship by Kreiser and Davis (2010)

Although the model presented in Figure 3.6 is also concerned with the relationship between firm-level entrepreneurship and performance in terms of profitability and growth, Kreiser and Davis (2010:41) go further to argue that the three sub-dimensions of EO have been shown to possess a differential relationship with firm performance. Their model underscores the importance of paying particular attention to the differential relationship that exists between the sub-dimensions of EO: innovativeness, pro-activeness, risk-taking, and firm performance just as it is in this study.

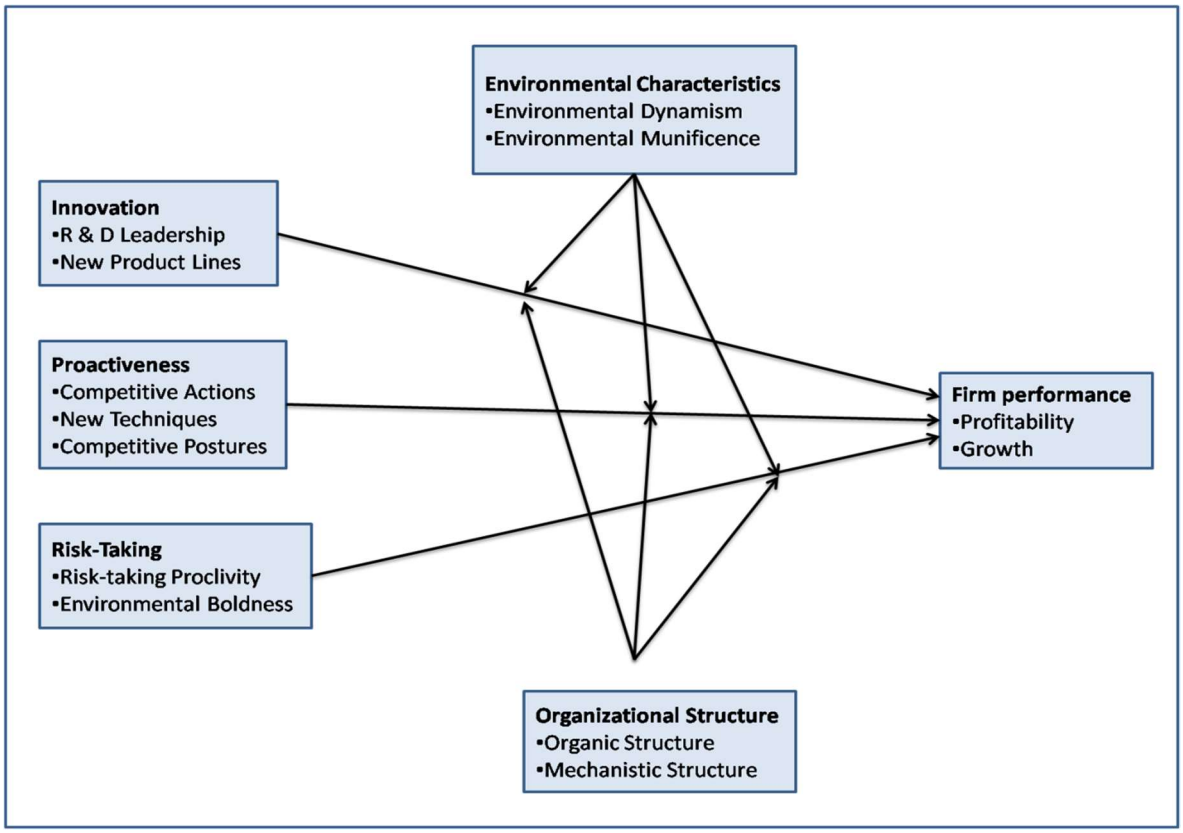

Figure 3.6: A theoretical model of entrepreneurial orientation: environment–structure–performance relationship

Source: Kreiser and Davis (2010)

This is consistent with Miller's (2011:880) call to pay attention to the different components of EO. Included in this model are other pertinent variables, environmental characteristics and organisational structure that may affect the EO-performance relationship.

According to Kreiser and Davis (2010:43) environmental attributes such as "dynamism" and "munificence" independently moderate the relationship between "innovativeness", "pro-activeness" and "risk-taking" and "performance". This model is relevant to the present study as it articulates the multi-dimensionality of EO, stressing that the sub-dimensions are unique constructs that can vary independently of each other. The moderating role of "environmental dynamism" and "munificence" (the obverse of "hostility") is also considered. Although the consequences of these relationships are "firm performance", it consists of "growth" as its dependent variable. Despite this, their model falls short in that it does not consider the dimensions of "competitive aggressiveness" and "autonomy" as intended in this study.

3.4 BIDIRECTIONAL NATURE OF THE ENVIRONMENT AND ENTREPRENEURIAL BEHAVIOUR

A distinctive feature of Covin and Slevin's (1991) model is the bi-directional nature of the relationship between the environment and entrepreneurship. It indicates that certain environments may elicit entrepreneurial behaviour from the firms that are within them. Lthan, Stajkovic and Ibrayeva (2000:105) analysed the effect of the institutional environment on the development of entrepreneurship in transitional economies and also found a two-way relationship between the environment and entrepreneurial behaviour. This phenomenon is typical of highly dynamic settings (such as high-technology industries) which are characterised by a disproportionate representation of entrepreneurial firms as compared to other industries (Zahra & Bogner, 2000). Similarly, a dynamic environment has been found to encourage entrepreneurial behaviour at firm level and organisations often respond to challenging environmental conditions such as those presented in rapidly changing environments by taking risks, innovating, and exhibiting pro-active behaviour and therefore adopting an entrepreneurial stance (Decker, Haltiwanger, Jarmin & Miranda, 2014). Just as environmental conditions may prompt entrepreneurial tendencies, such a strategic posture may induce a change in environmental conditions.

The argument for a bi-directional relationship between entrepreneurial posture and environmental conditions was first made by Miller and Friesen (1982:6) and then re-iterated in Covin and Slevin's (1991) model of entrepreneurial posture. They argue that entrepreneurial firms are often found in dynamic and hostile environments because their venturesome managers prefer rapidly growing and favourable settings; these are settings which may pose high risks but possess high rewards. Such firms may even be partly responsible for making the environment dynamic by contributing challenging product innovations. This is because innovation prompts imitation and the more innovative the firms are, the more dynamic and competitive their environment becomes (Zahra, Sapienza & Davidsson, 2006).

3.5 ENVIRONMENTAL CONTINGENCIES IN ENTREPRENEURIAL ORIENTATION STUDIES

In terms of theory development of external influences on entrepreneurial orientation and firm performance, the earliest systematic treatment pertains to environmental contingencies (Gupta & Gupta, 2015:74). Miller and Friesen (1983), Miller (1983), and Covin and Slevin (1989) consider entrepreneurial proclivity as a function of the environmental context in which they operate. Lumpkin and Dess (1996:152) argue that the characteristics of the environment have a strong effect on the strength and direction of the relationship between EO and firm performance as shown in their conceptual model. Empirical research has found support for this view, proposing that the relationship of EO and firm performance is contingent upon the firm's external environment (Zahra & Garvis, 2000; Moreno & Casillas, 2008; Adamoko & Davis, 2014; Walker, Berry & Avellaneda, 2015). As a result of research on environmental moderators of EO, a cumulative body of knowledge is now available regarding congenial environmental attributes for actualising the performance benefits of EO. Table 3.1 presents the environmental contingencies in the EO literature. It enumerates published studies on EO that consider the moderating role of environmental variables (such as, uncertainty, turbulence, heterogeneity, industry development-phase complexity, munificence, dynamism and hostility) as defined by the authors. It also shows the context in which these studies are carried out with regards to the types of firms, industry and country.

Table 3.1: Environmental contingencies in entrepreneurial orientation literature

Author(s)s	Sample	Environmental Variable	Findings
Auh and Menguc (2005)	242 SBUs in various manufacturing industries in Australia	Environmental turbulence	When environmental turbulence is higher, the positive relationship between inter-functional coordination and EO is stronger; and the negative relationship between TMT functional diversity and EO is stronger.
Caruana, Ewig and Ramaseshan (2002)	136 government departments in Australia	Heterogeneity, technological turbulence, munificence	Entrepreneurial posture mediates the relationship between technological turbulence/ munificence and firm performance.
Chaston and Sadler-Smith (2012)	137 small firms in creative sector in the UK	Market conditions - level of competitiveness	When competitive intensity is higher, the positive relationship between EO and growth is stronger.
Covin and Covin (1990)	344 small manufacturing firms in Pennsylvania, US	Competitive aggressiveness, environmental hostility	High-performing firms are more aggressive than low-performing firms when environmental hostility is higher rather than when hostility is lower.
Covin and Slevin (1989)	161 small manufacturing firms in Pennsylvania, US	Environmental hostility	When environmental hostility is higher, the positive relationship between entrepreneurial posture and firm performance is stronger.
Dess, Lumpkin and Covin (1997)	32 firms across various industries in south western US	Environmental uncertainty and heterogeneity	Entrepreneurial strategy making assists firm performance in environments associated with greater uncertainty and heterogeneity.
Dimitratos, Liouukas and Carter (2004)	152 firms with outward international activities in Greece	Environmental uncertainty and hostility	When environmental hostility and environmental uncertainty are higher, the positive relationship between entrepreneurship and firm performance is stronger.
Doorn, van Jansen and van den Bosh (2013)	346 firms across various industries in the Netherlands	Environmental dynamism	When environmental dynamism is higher, the effect of team heterogeneity on the relationship between EO and performance weakens.

Author(s)s	Sample	Environmental Variable	Findings
Engelen, Neumann and Schmidt (2016)	41 S&P 500 firms in the US	Market concentration and dynamism	Narcissistic CEOs strengthen the EO– performance relationship in concentrated and dynamic markets.
Frese, Brantjes and Hoorn (2002)	87 SMEs in Namibia	Environmental dynamism, hostility, and complexity	EO is positively related to firm success in complex, hostile, and dynamic environments.
Kraus, Rigtering, Hughes and Hosman (2012)	164 SMEs in The Netherlands	Environmental turbulence	When market turbulence is higher, the positive relationship between various dimensions of EO and firm performance is stronger.
Lumpkin and Dess (2001)	124 executives of 94 non-diversified firms in the US	Industry development stage	Pro-activeness helps firms in the early stages of industry development while competitive aggressiveness assists in mature stages of industry development.
Moreno and Casillas (2008)	434 SMEs in Spain	Environmental dynamism and hostility	EO is more strongly related to firm growth in dynamic and hostile environments.
Naman and Slevin (1993)	82 SME high technology manufacturing firms in Pennsylvania, US	Environmental turbulence	Fit between entrepreneurial style and firm strategy enables better firm performance in turbulent environments.
Pearce, Fritz and Davis (2009)	250 religious congregations in Spain	Environmental munificence	EO assists firm performance when munificence is low.
Pérez-Luflo, Wiklund and Cabrera (2011)	400 firms across various industries in Spain	Environmental dynamism	Risk taking and pro-activity will assist innovation generation more than innovation adoption in dynamic environments.
Tsai and Yang (2014)	452 manufacturing firms in Taiwan	Technological turbulence	When market and technological turbulence are higher, the positive relationship between innovativeness and performance is stronger.
Wiklund and Shepherd (2005)	413 small business firms in Sweden	Environmental dynamism	When environmental dynamism is higher, the positive relationship between EO and firm performance is stronger.

Author(s)s	Sample	Environmental Variable	Findings
Yusuf (2002)	82 firms across various industries in Oman	Environmental uncertainty	Entrepreneurial posture assists performance for firms facing high environmental uncertainty.
Zahra (1991)	119 industrial firms: Fortune 500 companies	Environmental dynamism, hostility and heterogeneity	Environmental dynamism, hostility and heterogeneity positively impact corporate entrepreneurship.
Zahra (1996)	127 firms: Fortune 500 companies	Technological opportunities	Executive stock ownership is positively related to corporate entrepreneurship in industries characterised by high perceived technological opportunities.
Zahra and Covin (1995)	Multiple samples in the US and Fortune 500 companies	Environmental hostility	The positive relationship between corporate entrepreneurship and firm performance is stronger in hostile environments.
Zahra and Garvis (2000)	98 firms in 20 different manufacturing industries in the US	Environmental hostility	In hostile environments, there are diminishing returns to pursuit of entrepreneurship on firm performance.
Zahra and Neubaum (1998)	321 new ventures in the US	Environmental adversity	Environmental adversity is positively correlated to new venture's EO.
Zhou, Yim and Tse (2005)	350 brand categories in China	Technological turbulence, demand uncertainty	EO, demand uncertainty, and technological turbulence have positive effects on firm innovations.
Source: Gupta and Batra (2016:664).			

3.5.1 Environmental Dynamism, Environmental Orientation and Firm Performance

Uncertainty is the main characteristic of environmental dynamism. Miller (1988:291) stated that the dimensions of dynamism and unpredictability are the key components of the overarching construct of uncertainty. Dynamic environments are described as markets in which products have a short life-cycle, the level of industry innovation is high and customers' demands as well as competitors' actions are highly unpredictable (Wiklund & Shepherd, 2005; Urban, 2010:2; Bratnicka, 2014:61). Firms that invest in an EO could be expected to maintain and even improve business performance under conditions of high market turbulence and market conditions because these firms tend to possess an ability to react to the constant shifts taking place in the environment by exploring and exploiting new opportunities. On the contrary, firms without an EO risk strategic paralysis when faced with change (Kraus *et al.,* 2012:168). The logic for this belief stems from the argument that EO drives exploration within the firm and allows the reconfiguration of resources and knowledge into better product-market solutions to meet anticipated change (Atuahene-Gima & Ko, 2001; Hughes & Morgan, 2007). Firms that have not adopted an EO may not be able to profit from changing conditions since they are unable to reconfigure their resources and knowledge. It is likely that the products of these firms move out of market demand, resulting in weaker business performance (Wiklund & Shepherd, 2005), or they lose competitiveness within the changing market (Atuahene-Gima & Ko, 2001). In the face of environmental dynamism, the skills associated with an EO, such as:

- the ability to manage uncertainty;
- the ability to innovate to meet emerging opportunities and threats;
- the ability to anticipate direction and nature of market change, and
- the ability to tolerate risk,

would likely lead the managers of an entrepreneurially oriented firm to reframe and interpret events that result from such turbulence as opportunities for further business model change, growth and innovation, as opposed to threats that can only undermine the business. Indeed, Barr and Glynn (2004) found that a greater

propensity towards uncertainty avoidance (which might be thought of as an antithesis to classic views of EO) has been associated with a greater interpretation of strategically relevant events as threats as opposed to opportunities. Given that the skills engendered and embedded by an EO would be expected to shape a firm's entrepreneurship capability over time (Wiklund & Shepherd, 2003), such a reinforced capability should enable a firm to manage market turbulence better so that the firm ought to be able to capitalise when market turbulence is acute. As such, business performance would be expected to improve. A contingency theory perspective of this kind suggests that the direction and strength of the EO-performance relationship might be influenced by a dynamic environment (Frank *et al.,* 2010; Adamako & Davis, 2014).

In this study, it is suggested that, besides the direct effect of EO on business performance, due to the uniqueness of its dimensions, innovativeness, pro-activeness, risk-taking, competitive aggressiveness and autonomy will be related positively to the business performance of SMEs in a dynamic environment where the uncertainty is caused in a turbulent environment. This expectation is consistent with prior empirical studies by Moreno and Casillas (2008), Janssen (2009) and Tiantian, Yeizhuang and Qiangian (2014) who associated EO with superior business performance in dynamic environments as opposed to static environments.

3.5.2 Environmental Hostility, Environmental Orientation and Firm Performance

Hostile environments are characterised by precarious industry settings, intense competition, a harsh overwhelming business climate and relative lack of exploitable opportunities (Covin & Slevin, 1989:75; Anderson, Kreiser, Kuratko, Hornsby & Eshima, 2015:1586). Therefore, they present an unfavourable environmental condition typified by scarce resources and opportunities (Rosenbusch *et al.,* 2013). Bratnicka (2014:61) elaborates this general lack of opportunities and resources is because of severe regulatory restriction, shortage of labour or raw material and decreasing markets that influence the extent to which the environment hinders sustained organisational stability and growth. In hostile environments, there is increased rivalry in the industry or depressed demand for an organisation's product

or services which endangers survival of the firm and unfavourable change which negatively affects an organisation's goals and mission.

Since hostile environments are characterised by high failure rates, intense competitive pressure and price-based competition (Kuratko *et al.,* 2014:28), businesses that lack the capability to respond entrepreneurially to such intense rivalry and scare opportunities are likely to lose competitiveness and their survival may become threatened. However, research has shown that entrepreneurial organisations perform better in hostile environments as they are able to identify the scarce emerging opportunities as first movers exploit them well before the less entrepreneurial make a move (Casillas, Moreno & Babero, 2010).

Zahra and Gavis (2000:470) explore the moderating effect that the perceived hostility of the international environment has on the relationship between international corporate entrepreneurship (ICE) which is operationalised by innovativeness, pro-activeness and risk-taking and company performance. The results show that ICE positively associates with a firm's overall profitability and growth as well as its foreign profitability and growth. Those firms that aggressively pursued ICE in international environments with higher levels of hostility had higher returns on assets (RoA) but did not achieve significantly higher levels of growth.

Lumpkin and Dess (2001) compared the contingency effect of hostility on two dimensions of EO – pro-activeness and competitive aggressiveness. Findings from their empirical study show that, in hostile environments (where competition is intense and resources are constrained), competitively aggressive firms had stronger performance. The findings suggest further that these two different approaches to entrepreneurial decision making may have different effects on firm performance. The differences were particularly apparent in the way firms relate to their external environment as firms in hostile environments, where competition for customers and resources is intense, are more likely to benefit from competitive aggressiveness – a response to threats.

Irrespective of evidence that hostility moderates the relationship between EO and firm performance, there are conflicting views about the inter-relationships between EO and the environment. For example, it is not quite clear whether hostility has a

positive (Lumpkin & Dess, 2001; Moreno & Casillas, 2008; Bratnicka, 2014:64) or negative (Zahra & Garvis, 2000:484; Wiklund *et al.,* 2009) association with EO and its performance outcomes. Conceptual logic seems to provide guidance in both directions. On the one hand, it is possible that in hostile environments there is limited slack to deploy when undertaking a new and risky endeavour; a perspective that relies on the resource-based theory. On the other hand, it may be that during hostile times, managers are forced to put in substantial effort toward endeavouring activities because the viability of the firm is under threat, a view that is motivation-based. Thus, environmental hostility can be a double-edged sword for entrepreneurially oriented firms (Rosenbusch *et al.,* 2013). Such confusion is widespread in EO studies about environment contingencies. However, more work is needed to shed light on the specific mechanisms by which environmental factors enhance or decrease EO's effects on firm performance and growth.

However, the present study interrogates the moderating effects of both the dynamism and hostility of the environment on the relationship between the individual dimensions of EO and employment growth within the context of small businesses in South Africa. The next section of this review leads to an extensive discussion on small businesses in South Africa.

3.6 DEFINING A SMALL BUSINESS IN SOUTH AFRICA

Small businesses are found in different sizes and forms across the world and are not uniform. Therefore, there is no consensus on the definition of a "small business" (Storey, 2016:9). In the United Kingdom and across the European Union, the definition of a "small business" is based on the number of people employed (Bridge, O'Neill & Martin, 2009; Storey, 2016; Rodes, 2017:5). The United States of America (USA) defines a "small business" based on employment and turnover (Small Business Administration, 2018). In China, the categorisation is between the sectors based on number of employees and turnover (Chen, 2006:140). The Indian definition is based on investment in plant and machinery, largely because small businesses drive the industrial sector, whilst Brazil, Malaysia and Canada consider the number of employees and other criteria in their definition of a "small business". It is noteworthy that the capacity of small businesses for employment creation is a common feature of these definitions (irrespective of other criteria) which is

consistent with this study's primary focus – employment growth. Hence, Table 3.2 presents the classification of small businesses based on the number of employees in six selected countries in detail. It can be observed that there are differences in each country's operationalisation of the concept of a "small business". This asymmetry exists due to the nature of economic development in each country (Steiger, Duller & Hiebl, 2015:42; Storey, 2016:10).

Table 3.2: Classification of small businesses in selected countries

Country	Number of Employees			
	Micro	**Very Small**	**Small**	**Medium**
South Africa	< 5	< 10 However, in construction, mining and manufacturing it is < 20	< 50	< 100 However, in construction, mining and manufacturing it is < 200
Canada	< 5	Not applicable	< 50 in most industries	< 500
USA	Not applicable	Not applicable	< 100 for non-manufacturing sectors	< 500 for manufacturing and mining sectors
United Kingdom	< 9	Not applicable	10 to 99	< 500
Brazil	< 9	Not applicable	10 to 49	< 250
Malaysia	< 5	Not applicable	5 to 50	51 to 150
Source: Author's own compilation.				

In South Africa, the most acknowledged depiction of a "small business" is embedded in the National Small Business Act 102 of 1996 of the Republic of South Africa (RSA)

(RSA, 1996) as amended by the National Small Business Amendment Act 26 of 2003 and Act 29 of 2004 (RSA, 2003 & 2004), that define SMMEs in a number of different ways, generally with reference to either the number of employees and/or to turnover bands. Taken in its broadest sense, the concept of a “small business” can be very broad. It includes any form of economic activity – registered or not – that provides its owner with an income but remains below the thresholds for a large enterprise. Officially, a “small business” is defined in Section 1 of the National Small Business Amendment Act 29 of 2004 (RSA, 2004) as:

> …… a separate and distinct business entity, including co-operative enterprises and non-governmental organisations, managed by one owner or more which, including its branches or subsidiaries, if any, is predominantly carried on in any sector or sub sector of the economy mentioned in Column I of the Schedule 14…….

The classification of “small business” according to the National Small Business Act 102 of 1996, as amended by the National Small Business Amendment Acts 26 of 2003 and 29 of 2004, has been amended slightly to focus on a national classification of SMMEs in preference to a sectoral classification, with distinctive exemplars across business size category as presented in Table 3.3.

It can be drawn from the table that defining a small business in South Africa takes into cognisance the unique characteristics the sub-groups of businesses within the SMME cohort and the industries in which they operate. Hence, generalising on the small business sector with an array of features and not considering their unique features can be erroneous and may not be effective for research and policy making. Accordingly, this study takes into cognisance these sub-categories in this review and in the analysis of the data collected.

Besides the classification of a small busineses according to its size, the phase of business operation is of relevance to this study as well. This study leverages on Global Entrepreneurship Monitor model. Hence Figure 3.7 presents the entrepreneurship process and Global Entrepreneurship Monitor operational definitions (Singer, Amorós & Arreola, 2015:23) and indicates the relationships between the different phases of businesses operations as used in this study.

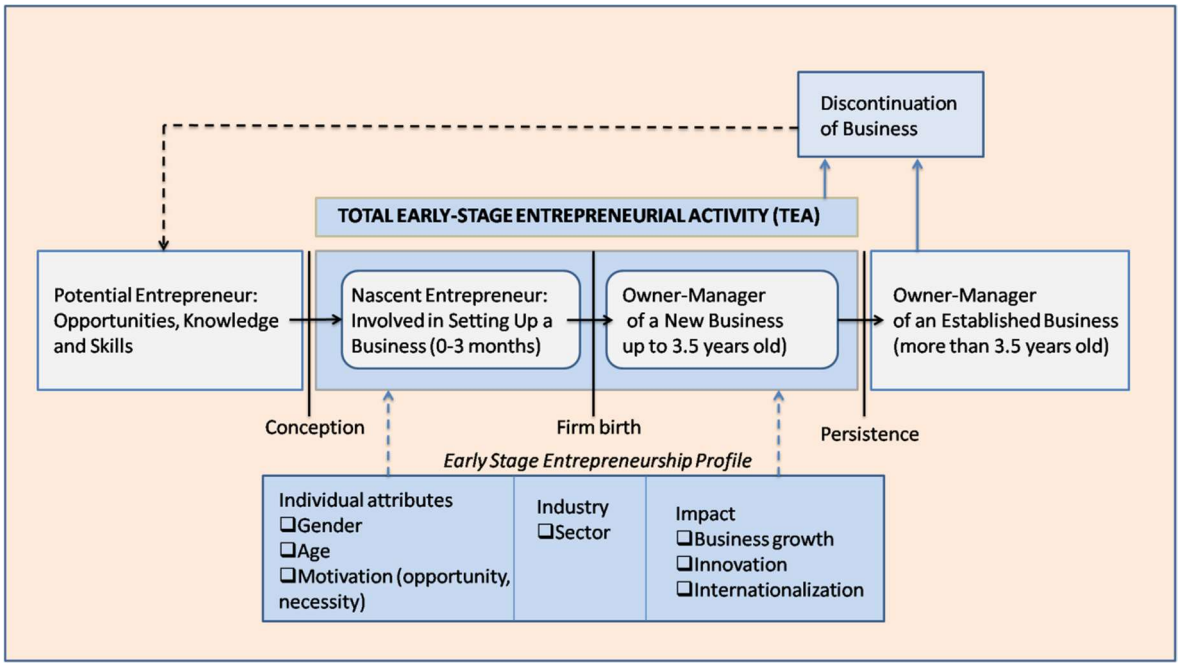

Figure 3.7: The entrepreneurship process and Global Entrepreneurship Monitor operational definitions (Singer, Amorós & Arreola, 2015:23)

As shown in the GEM model, it takes three months for a business to transit from conception to firm birth through the nascent phase, and three and half years from firm birth to persistence through the new phase. Both phases constitute the total early-stage entrepreneurial activity. Beyond the threshold of persistence, it is considered that it has become an established business. This study is largely intrested in established busineses who have persisted in businesses, meaning that have been in operation for at least three and half years and possibly have recorded employment growth.

3.7 SIGNIFICANCE OF THE SMALL BUSINESS SECTOR

Within the market economy, small businesses are initiators and facilitators of economic development and an important component of the economy. Due to their basic characteristics; private property, entrepreneurial attributes, flexibility and adaptability, as well as their potential to react to the challenges and turbulences in the environment, small enterprises give a unique contribution to economic growth and employment generation (Spremo & Micic, 2015:63). Entrepreneurship and the

Table 3.3: Broad definitions of SMMEs in the National Small Business Act (RSA, 1996, 2003, 2004)

Size	Examples	Number of Employees	Annual Turnover	Gross Assets Excluding Fixed Property
Micro	Hawkers, vendors and subsistence farmers.	< 5	< R150 000	< R100 000
Very Small	Operating in the formal market with access to technology.	Fewer than 10 or 20* depending on industry.	Less than R200 000 to R500 000* depending on industry.	Less than R150 000 to R500 000* depending on industry.
Small	Generally, are more established than very small enterprises and exhibit more complex business practices.	Fewer than 50.	Less than R2 million to R25 million* depending on industry.	Less than R2 million to R4.5 million* depending on industry.
Medium	Enterprises are often characterised by the decentralisation of power to an additional management layer.	Fewer than 100 or 200*, depending on industry.	Less than R4 million to R50 million* depending on industry.	Less than R2 million to R18 million* depending on industry.

*Mining, Electricity, Manufacturing and Construction Sectors.

Source: RSA (1996, 2003, 2004).

small business sector represents an important and fundamental source of innovation, social integration, employment and expansion of new business practices as they facilitate economic growth (Gupta, Ghua & Krishnnaswani, 2013:3; Audrestsch, Coad & Segarra, 2014). The existence of a well-established and vibrant small business sector is often indicative of advanced entrepreneurship development and a booming economy. This applies in both developed and developing economies and is the situation in the South African emerging economy (Neneh & van Zyl, 2017:169). In fact, the small business sector is a significant contributor to the economy and has been acknowledged as critical to job creation and inclusive growth (Herrington, Kew & Kew, 2015:43).

Despite much debate, it is difficult to dispute the direct contribution that small businesses make to create new jobs (de Wit & de Kok, 2014:283; Spremo & Micic, 2015:69) and the relationship between entrepreneurship and economic growth (Galindo & Mendez, 2014:825; Urbano & Aparico, 2016:34).

Even though entrepreneurship is not the exclusive domain of small enterprises, the two are not far from each other as small businesses are the initiators of change and the engines through which entrepreneurial tendencies are expressed. The small business sector stimulates industrial development and provides a disproportionately large share of new jobs. For this reason, economists have an intuitive opinion that there is a positive relationship between entrepreneurship in small enterprises and GDP growth (Wennekers, Stel, Carree & Thurik 2010; Spremo & Micic, 2015:69), although this proposition is subject to continual empirical research. Small businesses have become relevant to local, regional and global economies for several reasons. National governments tend to invest in the development of entrepreneurship and small enterprises as they have proven to be one of the most effective ways to create new jobs, facilitate GDP growth and raise the standards of living amongst the population. Irrespective of their size or form, they enable individuals who have entrepreneurial aspirations and potentials to start their own businesses. Since the need for higher levels of entrepreneurship and a vibrant small business sector has been reiterated (Herrington *et al.,* 2015:43; Bureau for Economic Research, 2016:5), the following section outlines the importance of small businesses in South Africa.

3.8 IMPORTANCE OF SMALL BUSINESSES IN SOUTH AFRICA

In South Africa, the exact size of the SMME sector is not known because of the large number of businesses that operate in the informal sector (FinMark Trust, 2010:7) and the discrepancy in the number of Value-Added Tax (VAT)-registered small businesses (Tustin, 2015:81). However, it has been reported that there are 2 251 821 SMMEs in South Africa, of which 667 433 are “formal” and 1 497 860 “informal” (Bureau for Economic Research, 2016:1). Furthermore, approximately 98 % of SMMEs are micro and very small enterprises, while only 2.4 % are small and medium firms (Makina, Fanta, Mutsonziwa, Khumalo & Maposa, 2015:11). The geographic distribution reveals that Gauteng has the highest concentration of small business owners (22.9 %). Retailers comprise 78.7 %, while only 21.3 % are service providers.

The crucial role of small businesses to South Africa’s economic growth has been observed by Herrington *et al.* (2015:10). In the 2014 Global Entrepreneurship Monitor (GEM) South Africa Report, micro-, small- and medium- enterprises (MSMEs) are identified as a “secondary” economy and associated directly with the business environment, large firms and national economic growth. It is clearly indicated that the different categories of small businesses are the interlink between the primary sectors that drive the economy and household units that benefit from these enterprises through employment and income generation. Nieman and Nieuwenhuizen (2014:24), Booyens (2011:67) and the Bureau for Economic Research (2016:6) have indicated why SMMEs have become a subject of focus in policy making in South Africa as:

- The labour-absorptive capacity of the SMME sector is higher than that of other size classes, therefore, it is a more effective avenue for income generation and poverty alleviation.
- The average capital cost of jobs created by SMMEs is lower than in larger businesses.
- SMMEs allow for more competitive markets.
- SMMEs adapt more rapidly compared with larger businesses to changing preference and trends.
- SMMEs often use local resources.

- SMMEs provide opportunities to aspiring entrepreneurs; especially those who are unemployed, under-employed or retrenched.
- Workers in the SMME sector require limited or no skills or training as they often learn on the job.
- Sub-contracting by larger enterprises to SMMEs lends fertility to production processes.
- SMMEs play a vital role in technical and other innovations.

Considering the current economic situation in SA and the National Development Plan (NDP) that has been laid out, there is need for an aggressive economic growth strategy in which SMMEs play a significant part. One of the major economic goals of this plan is to reduce unemployment to 6 % by 2030. In order to achieve that goal, South Africa would have to generate 11 million additional jobs, which would require real GDP to grow by 5.4 % annually. The South African Reserve Bank, however, predicts 2018 growth of only 3 %. With official unemployment levels at 26.7 % and unofficial rates even higher (StatsSA, 2017), SMME success is crucial to not only GDP growth, but also to job creation. Therefore, research that investigates employment growth in the small business sector is relevant, timely and has the potential of informing policy in South Africa toward achieving this goal.

3.9 STATE OF ENTREPRENEURSHIP IN SOUTH AFRICA

The state of entrepreneurship development is captured by the GEM report annually. It tracks the rates of entrepreneurship across multiple phases of entrepreneurial activity and assesses the characteristics, motivations and ambitions of entrepreneurs. Herrington, Kew and Mpanga (2017) elaborate on trends relating to entrepreneurial behaviour in sixty-four countries including South Africa. Table 3.4 presents measures that show the latest trends of entrepreneurship in South Africa and how it ranks amongst other countries.

The report assesses the level of entrepreneurship using indicators such as total early stage entrepreneurial activity (TEA), established business ownership rate and entrepreneurial employee activity (Herrington *et al.,* 2017:16). TEA is considered a central indicator of the GEM study as it measures the percentage of the adult population that are in the process of starting (nascent phase) or who have just started (new phase) a business. South Africa is reported at 6.9 % and ranks

51st position out of the 64 countries surveyed. In addition, an established business ownership rate of 2.5 % is reported, indicating the percentage of the adult population that are owners of firms that have been in operation for more than 42 months. “Established businesses” are a category of enterprises that have continued in entrepreneurship and have survived the nascent and new stages. They provide an indication of the sustainability of entrepreneurship in the economy.

These figures show low and uncompetitive levels of entrepreneurship in South Africa. It also shows that South Africa lags other countries in terms of entrepreneurial intensity. The Entrepreneurial Employee Activity (EEA) indicator appraises the development of new activities for an individual’s main employer, such as developing or launching new goods or services, or setting up a new business unit, a new establishment or subsidiary. With regard to EEA, the study reports a rate of 0.7 % in South Africa, ranking low at 54th position (as it does with other indictors of entrepreneurial activity).

Moreover, the report considers motivation toward entrepreneurship using the motivation index. It shows that there are almost twice as many innovation-driven opportunity entrepreneurs as necessity-driven entrepreneurs in South Africa. The country ranks averagely (39th position) on the motivation index. Herrington *et al.* (2017:7) observe this as a positive finding and state that almost three-quarters of South African entrepreneurs are opportunity-driven, which is higher than the average for efficiency-driven economies and substantially higher than the average for Africa. Most encouraging is that these authors note that this is South Africa’s highest rate of opportunity-driven entrepreneurship since 2008. This suggests that although fewer entrepreneurs are engaged in entrepreneurial activity, these individuals are pulled into entrepreneurship in order to pursue opportunities, rather than pushed by necessity.

Table 3.4: Entrepreneurial behaviour and attitudes in South Africa

Entrepreneurial Behaviour/Attitude	Indicators	Value (%)	GEM Ranking (out of 64 countries)
Self-perceptions about Entrepreneurship	Perceived Opportunity Rate	35	44
	Perceived Capability Rate	37.9	54
	Fear of Failure Rate	31.2	44
	Entrepreneurial Intensity Rate	10.1	51
Entrepreneurial Activity	Total Entrepreneurial Activity (TEA) Rate	6.9	51
	Established Business Ownership Rate	2.5	60
	Entrepreneurial Employee Activity Rate (EEA)	0.7	54
Motivation toward Entrepreneurship	Motivational Index	1.8	39
Gender Equality	Female/Male (TEA)	0.74	21
	Female/Male Opportunity Driven TEA Ratio	0.94	38
Impact of Entrepreneurship	High Job Creation Expectation Rate	27.6	17
	Innovation Rate	22	42
	Business Services Sector Rate	13.6	37
Societal Values about Entrepreneurship	High Status to Entrepreneurs Rate	78.1	17
	Entrepreneurship as a Good Career Choice Rate	72.6	15

Source: Herrington *et al*. (2017:92).

This study seeks to assess the EO of SMMEs in South Africa as EO provides an insight into the extent to which small enterprises are inclined toward entrepreneurship and how established the entrepreneurial culture is in the country. As indicated by TEA output, innovativeness and risk-taking may not be a predominant feature of South African small enterprises. The rate of established business ownership shows that a relatively low proportion of the population is starting businesses and even fewer are persisting. It attests to the high failure rate and other environmental challenges that will be discussed in the sections that follow.

3.10 THE BUSINESS ENVIRONMENT IN SOUTH AFRICA

In this section, South Africa's business environment is discussed. It provides an overview of the economy and elaborates on the country's competitiveness, the ease of doing business and the state of unemployment the country. It sheds light on the development of the small business sector and outlines the environmental barriers facing small businesses.

3.10.1 The South African Economy

South Africa is generally described as an upper-middle income, efficiency-driven and emerging economy (World Economic Forum (WEF), 2017; Herrington *et al.,* 2017:92). Table 3.5 summarises basic facts about the South African economy. The country has a population of about 56.52 million (StatsSA, 2017:2), a GDP of USD313.0 billion, GDP per caput of USD6 694.6 and contributes 0.64 % to the global economy (International Monetary Fund (IMF), 2016) and 25.5 % to the Sub-Saharan African economy (Focus Economics, 2015). It is the 47th most competitive economy in the world, second-most competitive economy in Africa and small businesses contribute 36 % to South Africa's GDP (WEF, 2017). However, the country battles with social and economic challenges such as unemployment (currently 26.7 %) (StatsSA, 2017), inequality and poverty.

Table 3.5: An overview of the South-African economy and business environment

Country	Republic of South-Africa
Population	56.52 million
Gross Domestic Product (2016)	USD313.0 billion
Gross Domestic Product per Caput (2016)	USD6 694.6
SME Percentage Contribution to GDP (2017)	36 %
Percentage Contribution to Global Economy (2016)	0.64 %
Unemployment Rate (2017)	26.7 %
Phase of Economic Development	Efficiency driven
World Bank Doing Business Rating (2015)	65 / 100, Ranking 74th out of 190 countries
World Bank Starting Business Rating (2015)	Ranking 131st out of 190 countries
World Economic Forum Competitiveness Rating (2015)	4.5 / 7, Ranking 47th out of 138 countries
Source: Author's Own Compilation	

3.10.2 National Economy and Competitiveness

The World Economic Forum (WEF) (2017:9), assesses the competitiveness of economies based on twelve pillars:

- institutions,
- infrastructure,
- macro-economic environment,
- health and primary education,
- higher education and training,

- goods-market efficiency,
- labour market efficiency,
- financial market development,
- technology readiness,
- market size,
- business sophistication, and
- innovation.

Table 3.6 presents South Africa's global competitiveness indicating these pillars. The global competitiveness is scored on a 7-point scale and ranked out of 138 countries. The overall result shows a score of 4.5 and ranking of 47th position. In comparison with previous years, South Africa improved marginally (both its score and ranking) from 56th in 2015 and 49th in 2016 to its current (47th) position. It has been relatively less affected by the fall of commodity prices, compared with other Sub-Saharan African economies, and has recorded change in almost all aspects of competitiveness.

With regard to the stage of economic development, South Africa is in the efficiency driven category (WEF, 2017:9). This is enhanced by:

- the country's well-developed financial market,
- a fairly large market for goods and services,
- technology readiness, and
- efficiency with goods-to-market transit.

Table 3.6: Summary of South Africa's competitiveness report

Pillars of Competitiveness	Score (1 to 7)	Rank (out of 138)
Institutions	4.5	40
Infrastructure	4.2	64
Macroeconomic environment	4.5	79
Health and primary education	4.3	123
Higher education and training	4.2	77
Goods, market efficiency	4.8	28
Labour market efficiency	3.9	97
Financial market development	5.2	11
Technology readiness	4.7	49
Market size	4.9	30
Business sophistication	4.5	30
Innovation	3.8	35
Overall	4.5	47

Source: World Economic Forum (2017:146).

However, a number of shortcomings limits South Africa's competitiveness:

- infrastructure development – both in transport and power supply (with recurrent power failures leading to inadequate energy for manufacturing),
- institutional quality has diminished,
- increased political uncertainty,
- less transparency,
- security concerns,
- business leaders having less trust in politicians, and
- labour market efficiency and rate of innovation is low.

These factors constrain South Africa's economic growth and make it difficult for employment creation.

3.10.3 Doing Business in South Africa

In understanding the South African business environment, it is pertinent to consider the ease of carrying out business activities. The World Bank Group conducts an annual report which measures how businesses are regulated. This report assesses the legal and administrative requirements of operating a business across countries. It entails a survey that interrogates ten aspects of running a business:

- starting a business,
- dealing with construction permits,
- getting electricity,
- registering property,
- accessing credit,
- protecting minority investors,
- paying taxes,
- trading across borders,
- enforcing contracts, and
- resolving insolvency.

Table 3.7 shows South Africa's "doing business" rankings from 2016 to 2018 out of the 190 countries. The reports show a marginal improvement in payment of taxes (ranked 46th in 2018). However, based on the 2018 rankings, South Africa has not improved with regard to:

- starting a business (ranked 136th),
- dealing with construction permits (ranked 94th),
- getting electricity (ranked 112th),
- registering property (ranked 107th),
- accessing credit (ranked 68th),
- protecting minority investors (ranked 24th),
- trading across borders (ranked 147th),
- enforcing contracts (ranked 115th), and
- resolving insolvency (ranked 55th).

This shows that regulations continue to be a challenge within the South African business environment and there seems to be an overall deterioration. South Africa has dropped consistently from 72nd position (in 2016) to 74th position (in 2017) to 82nd position (in 2018) (World Bank Group, 2018:4). The distance-to-frontier (DTF) score indicates the level of regulatory performance yearly. There has been a decrease in DTF score from 68 to 64.86 over the past year. This is consistent with Herrington *et al.* (2017:6) who confirm the worsening situation of South Africa's business environment. Since this study entails the relationship between the EO of SMMEs and the environment, the next section will elaborate on the environmental challenges faced by South African small businesses.

Table 3.7: South Africa's "doing business" rankings and points

Topics	2018 Ranking (out of 190	2017 Ranking (out of 190)	2016 Ranking (out of 190)	2018 DTF Points (0 to 100)
Starting a business	136	131	125	79.79
Dealing with construction permits	94	99	98	67.53
Getting electricity	112	111	108	63.21
Registering property	107	105	100	58.43
Accessing credit	68	62	60	60.00
Protecting minority investors	24	22	18	70.00
Paying taxes	46	51	49	80.02
Trading across borders	147	139	137	58.01
Enforcing contracts	115	113	110	54.10
Resolving insolvency	55	50	51	57.59
Overall	**82**	**74**	**72**	**64.86**

Source: World Bank Group (2018:193).

3.11 ENVIRONMENTAL CHALLENGES FOR SMALL BUSINESS IN SOUTH AFRICA

The challenges facing SMMEs in South Africa are well documented and have been viewed from diverse perspectives and in different contexts. However, there are inconsistencies with regard to the rate of business failure in the country. It is estimated that 70 % to 80 % of small businesses fail within the first three years of operation (Fatoki, 2014:922).

In terms of international comparative data, South Africa has one of the world's lowest survival rates of SMME start-ups. It is estimated that as many as 80 % of South Africa's SMMEs fail within one year of start up (Masutha & Rogerson, 2014:143; Tustin, 2015:84). Herrington *et al.* (2017:28), in the GEM 2016/17 South African Report, reveal that 67 % of businesses in 2016 discontinued for different reasons.

This high rate of business discontinuance is evidence of the challenging business environment in which SMMEs in South Africa operate. Since this review is centred on the environment, this section examines external factors that pose a threat to the survival of South African SMMEs within the context of the task and institutional environment which considers the actions of customers, competitors, private and governmental organisations.

Table 3.8 presents the major barriers facing SMMEs in South Africa. It provides a list of issues that have been identified from the literature as well as a brief explanation of their findings. It goes further to indicate the implications on the hostility and dynamism of the environment.

Table 3.8: Major barriers to SMME development in South Africa

Environmental Barriers	Relevant Authors	Key Findings	Implications on Dynamism/ Hostility of the Environment
Market	Fatoki and Garwe (2010), BER (2016)	Inadequate market research is common amongst SMMEs and they are often found in saturated markets where competition is high, this leads to inadequate demand and low profit	Increased hostility and competition with the environment
Lack of Profitability	Herrington *et al.* (2015:28)	Most SMMEs are burdened with high operational cost with very little profit margin	Increased hostility in the environment
Lack of Finance/ Inaccessibility to Credit	Kew (2015;18), Herrington *et al.* (2015:28), Fatoki and Patswawairi (2012:132), Fatoki and Odeyemi (2010:132)	Banks are reluctant to fund start-ups. SMMEs do not show a business idea with profit potential that can be funded. Very few SMMEs have collateral, managerial competence, viable business plan, are well networked and are properly located	Shortage of financial resources leads to increased hostility in the environment
Poor Infrastructure	WEF (2017), BER (2016), Fatoki and Garwe (2010:732)	Small businesses in rural area lack basic amenities such as electricity, telecommunication, roads and water which limit entrepreneurial efforts	Less competitiveness between regional and international market which leads to low dynamism
A Weak Economy	Tustin (2015:84), Fatoki and Garwe (2010:732), Herrington *et al.* (2017)	Directly indicated by high interest rates, high taxes, recession in the economy, high inflation rate, these are huge challenges for SMMEs as they stifle entrepreneurial efforts	Increased hostility due to shortage of resources and less dynamism due to fewer market opportunities
Insufficient Awareness of Support Initiatives	Moos, Mohale and Moshoeshoe (2018:191), Moos (2014), **dti** (2013:23)	Limited level of awareness about government support initiatives and low responses from SMMEs in terms of assistance by support agencies	Shortage of information so there is less creativity, opportunities to be taken and consequently lower dynamism

Environmental Barriers	Relevant Authors	Key Findings	Implications on Dynamism/ Hostility of the Environment
Inadequately Educated Workforce and Shortage of Skills	BER (2016)	Many SMME owners have limited education. Have not upgraded their businesses skills and do not invest in developing technical skills related to their trade due to cost	Shortage of human resources which leads to a more hostile environment. Lower capability for innovation this a less dynamic environment
Inefficient Government Bureaucracy	Jones (2013)	It takes too long to complete the processes of starting a business, getting permits in SA	It is indicative of minimal innovation and low dynamism
Unproductive State-Run Programmes	Tustin (2015:86) Xavier *et al.* (2012)	Government programmes are uncoordinated, and training curricula not standardised	It is indicative of minimal innovation and low dynamism
Onerous Labour Laws	BER (2016) Berry *et al.* (2002)	Labours laws in SA are to the advantage of employees and are considered a burden to small businesses	Increased environmental hostility
Corruption	Transparency International (2017)	SA has a corruption problem with a 43 % score and ranks 71st position amongst 180 countries. It portrays an unfriendly environment for businesses and discourages investment	Increased environmental hostility
Crime	Mahofa, Sundaram and Edwards (2016), Tustin (2015:87), Fatoki and Garwe (2010:732)	Small businesses are the targets of criminals. The high crime rate increases rate the cost of running businesses (for example, investment in fixed assets, insurance and security cost)	Increased environmental hostility
Source: Author's Own Compilation			

From the information presented in Table 3.8 it may be deduced that the environment in which SMMEs operate in South Africa is hostile. Hostility in this environment is evidenced by limited [inadequate] financial, human and technological resources (Tustin, 2015:84; Herrington *et al.,* 2015:28; WEF, 2017). Consequently, high competition, low customer loyalty and price wars are a predominant feature amongst SMMEs. A weak economy which is typified by sluggish growth contributes to a hostile environment. This is shown by decreased competitiveness, increasing inflation and the higher cost of capital. This makes it difficult for SMMEs to remain profitable, thereby threatening their sustainability and survival. The severe regulatory restrictions that SMMEs encounter, corruption and crime make it difficult for them to operate. It increases the cost of doing business and discourages investment in this sector. Evidence of disinvestment in the South African economy has been reported by Herrington *et al.* (2017:41).

Research and development capacities are required for innovation in small businesses (Wickham, 2006; Gupta *et al.,* 2013:3). It is necessary to assess the feasibility of transforming business ideas into tangible and profitable products, thus giving the firm a competitive edge in the long term. Nieman and Nieuwenhuzien (2014) stress the need for innovation in SMMEs to transform into entrepreneurial ventures. Since most SMMEs in South Africa are under-resourced and have limited research and development capacities, they have low levels of businesses innovation (Bureau for Economic Research, 2016:8). This implies a generally static and non-dynamic environment.

It is noteworthy that SMMEs in South Africa consist largely of micro enterprises and very small businesses that portray survivalist entrepreneurial tendencies. This category of enterprises is involved in entrepreneurship due largely to “push factors” and are not opportunity driven. This is consistent with their low motivational indices as reported by Herrington *et al.* (2017). Since micro and very small businesses display low innovation, their environment is less dynamic. These businesses do not take advantage of market opportunities. Hence, they tend to increase competition within the environment and new entrants find it difficult to remain profitable. In the long run, they show little potential for growth.

3.12 CHAPTER SUMMARY

This chapter has examined the concept of the environment both from a theoretical and empirical perspective. It has probed the role of the task environment from its earliest conception in the strategy literature (Miller & Friesen, 1982; Guth & Ginsberg, 1990) to the latest reviews by entrepreneurship scholars (Kreiser & Davis, 2010; Gupta & Batra, 2016). It argues that a direct relationship exists between the environmental dynamism and hostility and EO as firms often adopt an entrepreneurial posture and competitive orientation in the face of environmental challenges and opportunities. In this chapter, it was shown that the relationship between EO and firm performance would be over simplistic and incomplete without giving due consideration to the moderating role of the environment. Hence it draws from theorists, such as Lumpkin and Dess (1996:152) and Kreiser and Davis (2010), who presented models emphasising that environmental contingencies must be considered to understand fully how an EO leads to change in performance for the benefit of organisations.

It is noteworthy that amongst the task environment variables, dynamism and hostility have been the most considered in EO research and their moderating roles are largely positive (Gupta & Batra, 2016:666). This implies that when environmental dynamism and hostility are higher, the positive relationship between EO and firm performance is stronger. Therefore, entrepreneurial proclivity draws largely from the environment (Covin & Slevin, 1991, Lumpkin & Dess, 1996; Gupta & Batra, 2016). It is also recognised that EO is not necessarily required in every environment, especially those characterised by low munificence, high stability, and minimum complexity (Wiklund & Shepherd, 2005; Frank, Kessler & Fink, 2010; Rosenbusch *et al.,* 2013). This informs largely as to how relevant an EO strategy is and which sub-dimensions are effective within a given environmental context. As empirical research, this study continues to draw from these models and interesting results will continue to emerge.

With regard to small businesses, it is shown that SMMEs play an important role in the economy of South Africa and her National Development Plan 2030 (NDP, 2030:x). They are the interlink between the primary sectors that drive the economy and the household units that benefit through employment and income generation.

The policy relevance of the SMME sector outlined its high labour-absorptive capacity and that the average capital cost per job created is lower in comparison to those of large firms. In addition to this are the immense benefits of allowance for competitive markets, rapid ability to adapt to the environment and the use of local resources. It contends that the current small business environment is hostile and non-dynamic. It reveals that the state of South Africa's entrepreneurship development is not fully developed and the intensity of entrepreneurial behaviour in South Africa firms may be low.

The next chapter takes the entire review of literature further as it seeks to enquire into the nexus of relationships between the environment, the dimensions of EO and employment growth which is the primary objective of the study.

CHAPTER 4
THE ENVIRONMENT, ENTREPRENEURIAL ORIENTATION AND EMPLOYMENT GROWTH

4.1 INTRODUCTION

The potential for growth has been considered a distinct feature of an entrepreneurial firm (Davidsson, Delmar & Wiklund, 2006:21; Moreno & Casillas, 2008:70; Cassai & Minola, 2012:180; Anderson & Eshima, 2013:415), hence the phenomenon of small-firm growth has continued to attract the attention of entrepreneurship researchers. Over the last decade there has been considerable empirical research on the determinants of small business growth (Dobbs & Hamilton, 2006; Wiklund, Patzelt & Shepherd, 2009; Hanse & Hamilton, 2011; Obeng, Robson & Hough, 2014; Wolff, Pett & Ring, 2015). However, it is noteworthy that growth has not been studied in isolation as it is dependent on variables that are both internal and external to the firm. This is evidenced in its relationships as small firm growth has been investigated in relation to strategy (Moreno & Casillas, 2008), manager characteristics (Janssen, 2006), resource availability (Wiklund & Shepherd, 2005), employee development (Robson & Bennette, 2000), family involvement (Casillas & Moreno, 2010), product-market development (North & Smallbone, 2000; Pena, 2002), internationalisation (O'Gorman, 2001), and the environment (Lumpkin & Dess, 2001; Janssen, 2009; Casillas, Moreno & Babero, 2010; Tiantian, Yeizhuang & Qianqian, 2014).

Casillas and Moreno (2010), as well as Eggers, Kraus, Hughes, Laraway and Snycerski (2013), attribute the growth of small businesses to their entrepreneurial activities. However, the exact association between growth and entrepreneurship leaves room for clarity largely because of definitional problems with the concept of entrepreneurship and the indicators of growth (Davidsson, Kirchoff, Hatemi & Gustavsson, 2002:336). Moreover, EO has been associated with the growth of firms (Wiklund & Shepherd 2005, Rach *et al.,* 2009, Lechner & Gudmundsson, 2012). Studies such as Lumpkin and Dess (1996), Moreno and Casillas (2008) and Wiklund, Patzelt and Shepherd (2009) have shown that the performance outcomes

of EO are context specific, and that the relationship between EO and growth is affected by the external environment. Other empirical studies support the proposition that the effect of EO on performance implication varies across different types of external environments (Wiklund *et al.,* 2009:358; 2016 Shirokova *et al.,* 2016:703). Therefore, the relationship between EO and growth would be better understood with the concomitant consideration of the environment, particularly in regard to employment growth amongst small firms.

The two measures of firm growth used most widely in research are sales and employment (Delmar, 2006:65). The most cited collective benefit of small business growth is the contribution made through employment creation. Studies carried out across countries have shown that small businesses play a role in job creation (Neumark, Wall & Zhang, 2011:16; de Wit & de Kok, 2014:283). There seems to be consensus amongst scholars on the importance of small businesses for employment creation (Madsen, 2007:185; Jansen, 2009:314, Ayyagari, Demirguc-Kunt & Maksimovic, 2011:12; Altinay, Madanogulu, Devita, Arasli & Ekinci, 2016:873). Hence, the need to review the literature on employment growth and its relationship with EO and the environment.

As this study seeks to illuminate the antecedents of firm level EO, this chapter commences by drawing attention to the relationships between the environment and EO. The chapter discusses the modelling of small firm growth and elucidates on the theoretical foundation that has informed its definitions in extant literature. Since this study investigates growth in employment amongst small firms, it reviews recent empirical studies that have considered employment growth and discusses internal and external factors affecting the growth of small firms. It goes further to explicate the relationships between each of EO's dimensions and employment growth. Furthermore, it interrogates the connection between the environment, each of the dimensions and employment growth. Whilst elaborating on these relationships, the research hypotheses have been generated.

4.2 THE ENVIRONMENT AND ENTREPRENEURIAL ORIENTATION

Several studies have demonstrated the role of the environment in entrepreneurial action (Miller, 1983; Covin & Slevin, 1991; Rauch *et al.,* 2009; Shirokova *et al.,* 2016). Morris, Kuratko and Covin (2008:7) show how actions within the environment create the need for new management practices that lead to sustainable competitive advantage and entrepreneurship. In similar vein, Wales *et al.* (2013:372) identify various external factors which could possibly be antecedents to EO. Evolutionary economy regards competition as a dynamic process in which firms try to adapt their strategies to market conditions. It has been argued that through their strategic decisions, firms develop actions that allow them to influence environmental conditions concurrently (Ruiz-Ortega, Parra-Requena, Rodrigo-Alaran, Garcia, 2013:478). Cognisant of this bi-directional relationship between the environment and entrepreneurial behaviour, Covin and Slevin (1991:10) assert that the environment has a stronger effect on entrepreneurial posture.

Theorising on the subject of what constitutes an entrepreneurial firm, Miller's (1983) seminal work on the correlates of entrepreneurship in three types of firms, posits that organic firms will often strive to be adaptive, as their entrepreneurial efforts reflect the demands of the environment. He asserts that the more dynamic and hostile an environment is, the more firms tend to be entrepreneurial. Dynamism and hostility require innovation since firms tailor their actions toward the environment; they will gear entrepreneurial efforts to the demands of the market (Miller, 1983:775). Subequently, the interaction between dynamism, hostility and EO has attracted the interest of other researchers (Wiklund & Shepherd, 2005; Prez-Luno, Wiklund & Cabrera, 2011; Shirokova *et al.,* 2016) and this section expounds these relationships.

4.2.1 Environmental Dynamism and Entrepreneurial Orientation

Dynamism describes the intensity of unpredictable environmental changes and the uncertainty of the external environment (Miller & Friesen, 1983:222; Chen, Zeng, Lin & Ma, 2017:127). These changes are related to market volatility, shifts in demand, consumer preferences, technological complexity and instability, as well as

unpredictability of competitors' behaviour within a firm's industry (Caruana Ewing & Ramaseshan, 2002:47; Miller & Friesen, 1982:2). Businesses are compelled to respond to them by modifying marketing practices and developing appropriate strategic initiatives. Ruiz-Ortega (2013:478) observes that, on the one hand, environmental dynamism (which is characterised by shifts in demand, technological and competitive environments) creates difficulties for firms while, on the other hand, it can bring about new opportunities for businesses to expand and develop competitive advantage. Shifts in demand allow firms to exploit new customer needs, and technological discontinuities which offer opportunities along a new technological trajectory (Yu, Hao, Ahlstrom, Si & Liang, 2014). At the same time, in dynamic environments where technology, demand, and competitor behaviour change quickly, existing opportunities and resources can quickly become redundant. In spite of this, firms that explore and exploit the opportunities it presents can outperform their rivals.

Entrepreneurial firms often operate in industries characterised by high market dynamism and short product lifecycles, such as high-tech industries (Thornhill, 2006:687; Haltiwanger, Hathaway & Miranda, 2014:6), and there is a stronger influence of EO on firm performance in such industries compared with those with low levels of technological development (Lisboa, Skarmeas & Lages, 2011:1276). Accordingly, EO has been found to be more beneficial for firm performance, in dynamic and uncertain environments compared with environments characterised by low dynamism (Covin & Slevin, 1989; Rauch *et al.,* 2009; Wiklund *et al.,* 2009).

4.2.2 Environmental Hostility and Entrepreneurial Orientation

Hostile environments are characterised by precarious industry settings, intense competition, harsh, overwhelming business climates, and the relative lack of exploitable opportunities (Covin & Slevin, 1989:75; Zahra, 1993:324; Tang & Hull, 2012:133). In a hostile environment, a firm's mission and survival are threatened through increasing rivalry in the industry or depressing demand for a firm's products or services (Miller & Friesen 1984:1174; Zahra & Garvis, 2000:475; Bratnicka, 2014:61).

However, there is another school of thought which suggests that hostility stimulates the pursuit of entrepreneurship (Zahra, 1991:263; Covin & Slevin, 1989:75, Zahra & Covin, 1995:43). Faced with unfavourable environmental conditions, a firm may opt to differentiate its products through intensive marketing and advertising activities in order to sustain customer loyalty or increase penetration of existing segments. With sustained hostility within the firm's principal markets, they are compelled to consider novel business ideas as replacements or supplements to existing business through internal developments, external joint venturing, or diversification (Keats & Hitt 1988). With reference to Zahra's model (see Section 3.3.2), increased environmental hostility in a firm's primary industry is associated with increased pursuit of entrepreneurship (Zahra, 1991:262). Though other components of the firm's task environment are a source of causal influence, environmental hostility plays a fundamental role in understanding a firm's entrepreneurial strategic posture and competitive orientation (Moreno & Casillas, 2008, Wiklund *et al.,* 2009, Kreiser & Davis 2010).

The earliest logic for causal adjacency between hostility and EO is that in hostile environments, where resources are scarce and growth opportunities limited, firms achieve superior performance by following tried-and-tested strategies that do not threaten the firm's survival (Miller & Friesen, 1983:22). According to Anderson *et al.* (2015:1586), this logic suggests a negative relationship between hostility and EO. Lumpkin and Dess (1996:159) had earlier argued that hostile environments with resource constraints, would lead to greater control, co-ordination and interlocking of behaviour. Their stance is that a smaller resource base would impede experimentation with new strategies and direct efforts toward conserving the limited resources. Under such conditions entrepreneurial behaviour would be stifled and, even if viable alternatives were proposed, allocation of sufficient resources to ensure proper implementation would be a problem.

Rosenbusch *et al.* (2013:643) consider this relationship through a meta-analytic approach depicting EO as mediating the relationship between hostility and firm performance. They found no direct relationship between hostility and EO, hence they concluded that there is likely no meaningful causal connection between environmental hostility and EO (Rosenbusch *et al.,* 2013:646). This insignificance

for the path between environment hostility and EO suggests that firms do not align their strategic posture to hostility in the environment.

Moreover, this controversy in the literature as to the nature and direction of the relationship between hostility and EO has been a concern amongst researchers (Covin, 1991; Zahra & Covin, 1995; Kreiser, Anderson, Marino & Kuratko, 2013, Wiklund *et al.,* 2009, Rosenbusch *et al.,* 2013). Rosenbusch *et al.* (2013:649), attribute the reasons for such contrasting results to differences in types of hostility. For example, the effects of price hostility on the innovation-performance relationship differs from those of non-price hostility. While innovation is less successful in price-hostile environments, non-price hostility increases the success derived from innovation (Zahra & Bogner, 2000:165).

Some studies are in favour of a positive link between entrepreneurial strategic posture and firm performance in hostile environments rather than in benign enivronments (Covin & Slevin, 1989; Kreiser & Davis, 2010; McGee, Khavul, Harrison & Perez-Nordtevest, 2012) since there is greater need for innovative, pro-active and risk-taking behaviour in such situations (Miller & Friesen, 1982:14). Innovative behaviour enables firms to modify their products and services in order to respond better to customers' needs and preferences (Kreiser & Davis, 2010:43; Vij & Bedi, 2012:17). Higher risk-taking and more pro-active actions allow firms to respond to competitors' actions (Chen *et al.* 2015:654; de Clercq, Demov & Thongpapanl, 2005:88). In order to compete aggressively, managers are "inclined to take business-related risks, to favour change and innovation" (Covin & Slevin, 1989:77), rather than remaining passive and re-active.

At the opposite extreme, benign environments provide safe settings for business operations in the industry (Shikovora *et al.* 2016:708; Zahra, 1993:324, Tang 2008:128). According to Martins and Rialp (2013:72), in benign environments, firms are not compelled to intensify their entrepreneurial efforts despite the fact that sticking to a conservative strategic posture could be uncompetitive within the environment. This implies the tendency to adopt a higher EO is lower. Rosenbusch *et al.* (2013:649) further observe that hostility may not have an effect on EO in small firms but significantly increases as firms grow larger since they have more resources to pursue an entrepreneurial strategy.

These divergent views on the relationship between hostility and EO which has been reiterated by McGee *et al.* (2012:5), necessitate further enquiry particularly with regards to the sub-dimensions. Given its multi-dimensional view in this study this chapter considers how the individual dimensions of EO relate to hostility in the environment.

4.3 ENTREPRENEURIAL ORIENTATION AND EMPLOYMENT GROWTH

Employment growth – as a measure of firm growth – has attracted attention from researchers for a number of reasons. Primarily, it serves as an indicator of entrepreneurial success and represents a measure of the firm's economic contribution to society (Davidsson, Delmar & Wiklund, 2006) since jobs provide incomes for individuals and households. Consequently, employment growth has been useful to economists and sociologists, and has been considered ahead of other growth measures in small business policy. However, businesses themselves prefer to measure their success in terms of sales growth (Davidsson & Wiklund, 2006:53).

Furthermore, employment is an appropriate criterion for measuring the size of an organisation as organisational processes primarily involve people; an increase in the number of people making an input in the organisation could be an indication of overall organisational growth. Delmar (2006:66) observes that managers generally wait for demand to stabilise before recruiting people. Hence growth in employment is a less volatile measure of growth as compared to sales. In addition, employment growth could indicate prior growth in market share and increased financial or non-financial capacity. This is consistent with the argument that financial growth is an antecedent to other forms of growth (Nieman & Nieuwenhuizen, 2014). It is noteworthy that in certain industries employment and sales growth correlate positively (Delmar, Davidsson & Gartner, 2003:197; Delmar & Davidsson, 2006:94). Implicitly employment growth could be a proxy for how well a firm is doing in terms of revenue and profitability. To further elaborate on this, the following section considers employment growth in the context of small firms.

The role of size in firm growth has been an object of research attention (Greve, 2008; Audretsch, Coad & Segarra, 2014; Peric & Vitezic, 2016) and has yielded interesting results. In an attempt to gain an understanding of the factors influencing new firm employment growth across four Latin American countries, Capelleras and Rabetino (2008:79) collected data from 582 entrepreneurs. Using regression analysis, their results suggest that employment growth depends on characteristics of the entrepreneur, the environment and firm characteristics such as the start-up size and age. They found that larger firms have a higher propensity to employ more workers and retain them.

Using a longitudinal approach, Ayyagari *et al.* (2011:427), examined the relationship between firm size, employment and productivity growth in the formal sectors of 104 countries and found that the entire SME sector employment contribution was comparable to that of large firms. Analysis of their data indicated a negative relationship between GDP per capita and small firm contribution to employment which implies that small firms contribute more to employment in low-income countries. In a related study, Klapper and Love (2010:194) found a strong positive relationship between firm births and income per capita. Taken together, these suggest that high-income countries are characterised by high rates of entry and turnover of small firms rather than a large SME sector. Although small firms do not employ the largest number of people, they generate the newest jobs across country income groups. These results of empirical studies reiterate the importance of small firms in facilitating employment generation within an economy irrespective of its level of development. Since this study examines entrepreneurial orientation of small firms its relationship with employment growth is further explicated.

From an empirical standpoint, Ferreira and Azevedo (2008) present EO as a resource contribution to employment growth in small firms. Based on their results they conclude that high growth firms have a strategic orientation that can be classified as entrepreneurial which requires innovative, pro-active and risk-taking behaviour. Moreover, from the perspective of the resources-based theory EO must be considered as an intangible resource of importance to employment growth. In addition, they assert that younger firms have a higher tendency for growth as compared to older ones (Ferreira & Azevedo, 2008:88).

Gurbuz and Aykol (2009:328) studied the relationship between entrepreneurial management (EM), EO and small firm growth using employment as a growth indicator. In their study they show that EO, when combined with EM (which consists of variables such as strategic orientation, growth orientation and entrepreneurial culture), presents a more powerful explanatory model for employment growth. Their results confirm the difference between a firm's entrepreneurial management and orientation. Based on this result they argue that increasing EO will lead to higher growth in employment when supported by appropriate management strategies.

Altinay *et al.* (2016:883) followed a similar approach in combining organisational learning capability (OLC) with EO in relation to employment growth amongst other measures. In this study, their structural model revealed a positive relationship between EO and sales growth and between EO and market share growth. However, the relationship between EO and employment growth was found to be statistically insignificant. In an earlier study of sustained EO on the performance of SMEs in Norway, Madsen (2007:185) reveals that firms that maintain or increase their EO over time show a positive relationship with employment growth. Since Madsen's research is a longitudinal study, it highlights the role of sustained entrepreneurial practice in ensuring firm employment growth.

In a more recent study, Fairoz and Hirobami (2016:66) independently considered three dimensions of EO and employment growth. From their study, one could gather that within SMEs operating in Japan's manufacturing sector, innovativeness and pro-activeness showed a non-significant positive relationship with employment growth while a positive significant relationship was found between risk-taking and employment growth. It appears that risk-taking firms are the ones recording growth in employment. Moreover, Fairoz and Hirobami's (2016) finding indicates a similarity between the dimensions of innovativeness and pro-activeness as they both display a congruent relationship with employment growth; a phenomenon observed by Lumpkin and Dess (1996:148) as well as Anderson *et al.* (2015:1591).

Based on these results, it is apparent that there have been different research outcomes of empirical studies that have investigated the relationship between EO and employment growth. Hence, researchers are yet to reach consensus on how entrepreneurial behaviour can bring about employment growth. Notably empirical

results on employment growth provide evidence that is difficult to discard as some dimensions of EO can be associated with employment growth. It is based on the need to clarify this subject further that the current study seeks to examine these relationships amongst small businesses in South Africa. Therefore, the following sections consider the relationship between the individual dimensions of EO and employment growth, probing the roles of environmental hostility and dynamism.

4.4 THE NEXUS OF ENVIRONMENT, INNOVATIVENESS AND EMPLOYMENT GROWTH

Organisations operating in dynamic environments are more likely to benefit from new product innovation than firms operating in stable environments (Miller, 1983:787; Prajogo, 2016:243). According to Miller (1988:284), product innovation is generally more prevalent and useful in dynamic environments. Without innovation, firms tend to fall behind as they lose their market share and sales. In addition, Zahra (1996:198) found that pioneering activities and radical product technologies are more appropriate in dynamic environments than in hostile environments. Zahra and Bogner (2000:141) found further support for this argument, indicating that dynamic environments serve to encourage the radical development of new products and technologies in order to capture premium market segments, or pre-empt competitors' entry.

Sirmon, Hitt and Ireland (2007:277) observe that market changes such as demand instigate the introduction of new technologies. For example, demand affects a firm's disposition to develop and introduce innovations. When market demand is high or growing, firms are more willing to invest in the development of new technologies because they perceive greater opportunities for receiving returns on them. In turn, these innovations affect consumer expectations and thereby affect competitors' behaviour. Therefore, while reductions or stability in demand often increase competitive rivalry, growing market demand can stimulate innovativeness. It is observed that increasing and decreasing demand can heighten competition (in different ways) and contribute to increasing environmental dynamism.

Rodrigo-Alarcon, Garcia-Villaverde, Parra-Requena and Ruiz-Ortega (2017:548) confirm the positive relationship between dynamism and firm innovativeness. Using

network theory to explain the contextual background to innovativeness, they demonstrated that technology dynamism has a positive effect on the generation and development of firm innovativeness. Thus, this study hypothesises that:

H_1: Environmental dynamism has a positive relationship with small business innovativeness.

Miller and Friesen (1983:229) contend that since resources are scarce and profit margins slim in hostile environments, businesses must pay attention to resource conservation and selective pursuit of economically competitive strategies rather than embarking on forceful and pro-active strategies that involve novel ideas and extensive risk-taking. Consistent with this stance, Miles, Arnold and Thompson (1993:12), report a negative association between entrepreneurial behaviour and environmental hostility. Khan and Manopichetwattana (1989:605) confirm the negative effect of environmental hostility on innovation in small firms whilst Wolff and Pett (2006:279) found a statistically significant correlation between innovativeness and hostility as well as a negative relationship between hostility and product improvement. In contrast, Li and Atuahene-Gima (2001:1129) found that turbulence in hostile environments creates new market opportunities, promotes innovation, and necessitates unlearning of routines for flexibility to embrace innovation. While there seems to be consensus regarding the importance of dynamic (Prajogo, 2016:247) and heterogeneous environments to innovation (Rosenbusch *et al.,* 2013:638), the same cannot be said for hostile environments.

Kreiser and Davis (2010:43) reiterate that it is likely that firms operating in munificent environments will also be more innovative in their strategic orientation than firms operating in hostile environments. They describe a munificent environment as one in which innovativeness is favoured because resources are available for development and the growth environment invites proliferation of new products. Zahra (1996:197) found that munificent environments acted to encourage research and development spending within firms, since firms operating in hostile environments may be reluctant to invest heavily in developing new technologies because hostility erodes profit margins and reduces the resources available for innovation.

Nonetheless, resource conservation in hostile environments calls for a cautious approach to innovation (Miller & Friesen, 1983:775). Rosenbusch *et al.* (2013:636) stress that for a firm to perform well in hostile environments, it should implement a strategic orientation characterised by low experimentation. Accordingly, innovativeness may be an inefficient response to hostility but a legitimate strategic orientation in non-hostile environments. For example, a firm that engages in a product innovation strategy under the condition of intense price-based competition may fail because the innovation does not meet demand and the firm suffers from an unwillingness of customers to value innovations with a price premium (Zahra & Bogner, 2000:165). Thus, firms in hostile environments are expected to exhibit lower innovativeness. The above theoretical arguments lead this study to propose that:

H_2: Environmental hostility has a negative relationship with small business innovativeness.

Of the five dimensions that constitute EO, innovativeness is the one that reflects the highest degree of consensus regarding its positive relationship with growth (Lumpkin & Dess, 1996:142; Rauch *et al.,* 2009:775). Moreno and Casillas (2008:510) state that a strategy of innovation in new products and new processes has a positive and significant influence on the firm's growth rate. An innovation strategy is one of the most typical roads to growth as it enables new business opportunities to be explored and the company's competitive edge to be improved. Lumpkin and Dess (1996:142) observe that innovation is characterised by processes in which the current market structures are disrupted by the introduction of new goods or services that shift resources away from existing firms and cause new firms to grow.

Earlier theorists emphasised the role of innovativeness in the entrepreneurial process in terms of "creative destruction". According to Schumpter (1942:83) the fundamental impulse that sets and keeps the capitalist engine in motion comes from new consumer goods, new methods of production or transportation and new markets. This process incessantly revolutionises the economic structure from within, destroying the old one and creating a new one. This process of creative destruction is the essential fact about capitalism. For an entrepreneurial firm, innovation is key to securing competitive advantage (Miller, 1983:771). Moreover, studies have

established a close association between high-growth firms and strategic innovation, which are those processes that represent a widespread re-organisation of the business (Cassia & Minola, 2012:191). Dachs and Peters (2014:214) examined the effect of innovation on employment growth of both foreign and locally owned firms and found that product innovation contributes more strongly to employment growth in foreign-owned firms as compared with locally-owned companies. Coad, Segarra and Teruel (2016:395) also found that employment growth does increase after research and development investment if innovation results in higher demand and market share. Therefore, the study proposes:

H_3: ***Small business innovativeness has a positive relationship with employment growth.***

Lumpkin, Martin and Sloat (2001:18) assert that a dynamic environment may be considered the ideal competitive environment for an entrepreneurial firm since it is characterised by high rates of innovation and so it demands that firms anticipate and adjust to customer needs. Dynamic environments create opportunities for small firms to exploit new business by adopting EO (Zahra, 2005:30). Moreover, it necessitates innovative behaviour and an orientation toward high-risk decisions (Miller & Friesen, 1982:14). Lumpkin *et al.* (2001:17) argue that family firms that emphasise innovativeness and risk-taking have stronger performance under dynamic conditions. These studies confirm the positive influence of environmental dynamism on entrepreneurial strategies and performance.

Casillas, Moreno and Barbero (2010:33) elaborate on the moderating effect of environmental dynamism on the dimensions of EO and growth, stating that dynamic environments allow small businesses to identify and exploit new opportunities through the development of newer products, services, and processes. In a dynamic environment, innovation can be more radical, given that there is a greater range of possibilities to explore and to exploit. Hence, an increased propensity for higher growth. On the contrary, in stable environments, innovation tends to have an incremental character, with slight modifications in existing products, services, and processes. Therefore, the influence of innovativeness on growth will be lower. In the context of small businesses, the moderating role of environmental dynamism finds its relevance in the greater speed with which decisions are taken as well as its

informal nature (Habbershon *et al.,* 2003:457; Mustakallio, Autio & Zahra, 2002:210).

With regard to the moderating effect of environmental hostility on innovativeness and growth Casillas *et al.* (2010:33) posit that in extremely hostile environments the most innovative businesses will have a higher chance of recording increased growth rates. Businesses with a greater orientation towards innovation will be the few identifying and exploiting the limited existing opportunities, providing higher rates of growth than less innovative businesses. However, from a different perspective, in hostile environments less innovative businesses will have difficulties growing given the intensity of the competition that characteries this type of environment. Therefore, this study hypothesises that:

> ***H_4:*** ***Environmental dynamism and hostility will moderate the relationship between small business innovativeness and employment growth.***

4.5 THE NEXUS OF ENVIRONMENT, PRO-ACTIVENESS AND EMPLOYMENT GROWTH

An entrepreneurial strategic posture makes it necessary for firms to search for new opportunities that arise in the market (Miller, 1983:771; Covin & Slevin, 1991:10; Lumpkin & Dess, 1996:146). According to Lumpkin and Dess (1997:4) pro-activeness suggests a forward-looking perspective characteristic of a market-place leader that has the foresight to act in anticipation of future demand. This is consistent with Miller and Friesen's (1978:923) view of pro-activeness as shaping the environment by introducing new products and technologies, and with Venkatraman's (1989:949) definition of pro-activeness as a continual search for market opportunities and experimentation with changing environmental trends. He stressed that these opportunities may not be related to the present line of operations, as they could require introduction of new products and brands ahead of competition and strategically eliminate operations which are in the mature or declining stages of their life cycles (Venkatraman, 1989:949). Therefore, pro-active behaviour also helps firms minimise the threats of product obsolescence and maintain industry leadership.

Kreiser and Davis (2010:43) identify the link between the adoption of pro-active behaviour and environmental dynamism. Since the industry conditions in a dynamic environment are subject to rapid change, firms that are pro-active and actively seek out opportunities will out-perform firms that are unwilling to exploit market opportunities. Dynamic environments act to create many new opportunities for firms, and pro-active strategies can be utilised effectively in order to seize these opportunities and to gain competitive advantage for a firm (Zahra, 1991:263).

The rapid rate of changes and difficulty in predicting future events trigger a high degree of pro-activity which helps firms to explore and exploit new resources that are required for the successful exploration and exploitation of new markets (Lumpkin & Dess, 2001:436). By the same token, dynamic environments will afford resource allocations towards innovations triggered by a firm's EO, enabling them to exploit opportunities in a similar way as they do in benign (non-hostile) environments. However, entrepreneurially oriented firms have an advantage in a dynamic environment.

Rosenbusch, Rauch and Bausch (2013:641) posit that the pro-active introduction of new products and services makes firms less vulnerable to the danger that their existing knowledge and competencies become obsolete. Firms that are pro-active in nature will continually improve – or even alter – their resource base. This prevents them from creating rigidities within the firm which are a non-productive condition for firms operating in dynamic environments. Firms in dynamic environments can be viable in the long run only if they manage to retain a highly flexible resource base (Rosenbusch *et al.,* 2013:641). Thus, a dynamic environment triggers the display of pro-activeness as an entrepreneurial attribute that embodies a focus on resource flexibility. Therefore, this study considers that:

H_5: ***Environmental dynamism has positive relationship with small business pro-activeness.***

In discussing the role of a firm's strategic posture in hostile environments, Covin and Slevin (1989:77) are of the view that an entrepreneurial strategic posture may be particularly beneficial to small firms in hostile environments. Since these environments contain fewer opportunities and are more competitive than benign environments it might be expected that successful firms in hostile environments will

gear their competitive efforts to the prevailing conditions by trying aggressively to gain or maintain a competitive advantage. Such an advantage will more likely result from the pro-active efforts of entrepreneurial firms than the passive and re-active efforts of conservative firms. Additionally, Miller (1983:775) states that, the more hostile an environment, the more pro-active firms tend to be. A stance that is drawn from the notion that firms will endeavour towards actions that are consistent with the environment and gear their entrepreneurial efforts to the demands of their markets.

However, Miller and Friesen (1983:223) posit that forceful pro-activeness, and a strong emphasis on novelty can be hazardous when competitive conditions become more demanding. This resource conservation perspective observed in hostile environments has not been ignored in subsequent studies. Lumpkin and Dess (2001:436) assert that in a hostile environment, the intensity of competition exerts more pressure on the firm. Thus, a greater need for interlocking organisational behaviour is necessary. In addition, less slack for experimentation and new strategies is available since such environments force firms to be more oriented toward conserving limited financial resources. Additionally, such conservative use of resources is antithetical to the important role of experimentation and discovery inherent in pro-activeness (Lumpkin & Dess, 2001:437). Although the aforementioned authors hypothesised that pro-active behaviour would be related negatively to performance in hostile environments but found that pro-activeness led to increased levels of performance in such environments, their argument could not be supported. This finding is consistent with the view held by subsequent studies (Kreiser, Marino & Weaver, 2002; Bogteyreva *et al.,* 2017:344). Thus, it is plausible to expect that hostile environments will act to increase the level of pro-active behaviour to a larger extent among small firms. Against this backdrop it is hypothesised that:

H_6: ***Environmental hostility has a positive relationship with small business pro-activeness.***

Rauch *et al.* (2009:775) found pro-activeness to be another dimension with a clear association with growth. “Pro-activeness” refers to the advantages derived from being the first mover (Lumpkin & Dess 1996:146) which can be leveraged on to ensure growth. Thus, it is considered to be the inherent attitude of the leader, as

opposed to that of the follower. Similarly, Venkataraman (1989:949) suggests that pro-activeness entails seeing new opportunities which may or may not be related to the present line of operations, introduction of new products and brands ahead of competition, strategically eliminating operations which are in the mature or declining stages of the life cycle.

Equally, pro-activeness is related to the exploration of opportunities through entrepreneurial behaviour in search of new market niches ahead of one's competitors. Exploration is risky, but offers potentially higher pay-outs (Lumpkin & Dess, 2001:434). Pro-active firms are characterised by intentional change which entails deliberate action on information toward change-making and not merely anticipating it. Bateman and Crant (1993:103) expatiate that such change-oriented actions alleviate the risk of complacency by ensuring firms are placed better to serve markets in the shorter term and shape them in the longer term. In addition, emphasis on anticipating and acting on future needs, positions the firms to seize initiative and act opportunistically in the marketplace, thereby shaping demand.

In a study of young high-technology firms, Hughes and Morgan (2007:656) found pro-activeness to be positively related to both product and customer performance. They posit that pro-activeness will secure higher performance returns because it implies customer-centrality considering the need to understand the customer, ascertain and exploit their needs and actively deconstruct the value package of competitors in an attempt to generate superior offerings. Casillas and Moreno (2010:276) also found that pro-active businesses reveal greater growth amongst SMEs in Spain. In similar vein, Stenholm, Pukkinen and Heinonen's (2016:700) comparative study of non-family and family firms, found pro-activeness to be associated with growth in both types. Therefore, this study is in support of the hypothesis that:

H_7: Small business pro-activeness has a positive relationship with employment growth.

Lumpkin and Dess (2001:444) show that in a dynamic environment characterised by rapid change and uncertainty, pro-active firms had higher growth relative to competitively aggressive firms. This may not be surprising as it is expected that the influence of pro-activeness on the growth of small firms is more intense in dynamic

environments than in stable ones (Lumpkin & Dess, 1996; Moreno & Casillas, 2008; Bogteyreva *et al.,* 2017). Pro-active behaviour requires that businesses act decisively to identify and seize growth opportunities in an attempt to exploit them (Lumpkin & Dess, 1996:147). These opportunities seem to be more predominant in dynamic environments which further necessitates increased pro-active responses, particularly where a high level of uncertainty surrounds the traditional approach to business. In dynamic environments, small businesses will take the initiative to explore and exploit such opportunities in order to trigger growth. On the contrary, in a less dynamic or stable environment, businesses will probably maintain the position that is consistent with traditional businesses or to improve it slightly by diversifying into other emerging business opportunities with greater potential profitability.

Furthermore, in extremely hostile environments, a reduced influence of pro-activeness of the business on growth is expected. Bogateyreva *et al.* (2017:344), provides two reasons for this. Firstly, it is not surprising that, with increased hostility within the environment, growth becomes less of an objective for businesses as their attention shifts towards seeking out ways to survive. In this scenario only intensely, pro-active businesses are enthralled and are capable of seizing the few opportunities available to facilitate growth. Secondly, the firm's vision for survival in the long term, coupled with its flexibility in decision-making and the involvement of all levels of management and stakeholders in its implementation, engenders a more pro-active approach when facing hostile environments. Moreover, Moreno and Casillas (2008:521) argue that entrepreneurial firms are masters at identifying the few opportunities available in a hostile environment and are able to exploit them before their competitors, given their foresightedness and a higher orientation to control and change the situation. Hence, in a hostile environment, more entrepreneurial firms tend to take advantage of less entrepreneurial firms. Based on these arguments, the present study proposes that:

H_8: ***Environmental dynamism and hostility will moderate the relationship between small business pro-activeness and employment growth.***

4.6 THE NEXUS OF ENVIRONMENT, RISK TAKING AND EMPLOYMENT GROWTH

As regards risk-taking propensity in dynamic environments, firms may benefit from taking more risky decisions, engaging in different projects and relying on uncertain actions. Dynamism in the environment seems to have a strong link with organisational risk-taking as firms that are risk averse under such conditions lose market share and will not be able to maintain a strong industry standing relative to more aggressive competitors (Lumpkin & Dess, 1996:145). Giley, Walters and Olson (2002:95) confirm the role of dynamism in top management team risk-taking, although they discovered that the benefit of risk-taking is reduced in a more dynamic environment. A relationship has been reported between organisational risk-taking and firm performance in dynamic environments (Kreiser & Davis, 2010:44). They stress that organisations need to make bold, risky strategic decisions in order to cope with the constant state of change common in dynamic environments. Their argument further suggests that organisational risk-taking will be more positively associated with performance in dynamic environments than in stable environments. Along the same line this study hypothesises that:

H_9: Environmental dynamism has a positive relationship with small business risk-taking.

The relationship between environmental hostility and risk-taking has produced unclear results in the past (Miles, Arnold, & Thompson, 1993:13; Martin & Rialp, 2013:71; Kreiser, Anderson, Marino & Kuratko, 2013:1). While extremely munificent or benign environments may not provide firms an impetus to take risks, it is also likely that excessively hostile environments will discourage organisations from taking unnecessary risks (Goll & Rasheed, 1997:585). Zahra and Garvis (2000:486) argue that while risk-taking would lead to increased levels of performance in moderately hostile environments, excessive risk-taking in extremely hostile conditions would erode the organisation's profits.

This is consistent with prior research claiming that even risk-prone managers would be discouraged from taking large-scale risks in extremely uncertain environments (Smart & Vertinksy, 1984:210). Goll and Rasheed (1997:585) also posited that the lack of resources in hostile environments would lead firms to avoid excessive risk-

taking and pay greater attention to the conservation of resources. According to Kreiser *et al.* (2013:2), this perspective has been informed largely by the concept of threat rigidity which argues that organisations will respond to threatening situations by lessening their emphasis on risk-taking and innovative strategies.

At the same time, highly benign environments will act to discourage organisational risk-taking since organisations in such environments can employ typically more conservative strategies and still remain profitable (Covin & Covin, 1990:38; Covin & Slevin, 1989:77). In benign environments, there is not enough impetus for substantial risk-taking, since firms can remain profitable by taking minimal risks.

Considering the non-significance of the relationship between EO and hostility found by Rosenbusch *et al.* (2013:646), other researchers have theorised that a non-linear relationship may exist between the two (Kreiser *et al.,* 2013:1). Therefore, it can be expected that the relationship between organisational risk-taking and environmental hostility is curvilinear in nature, with extreme levels of hostility or munificence acting to discourage organisations from taking excessive risks and that risk-taking behaviour is sustainable in conditions with moderate hostility. This stance has been supported empirically by Kreiser, Marino and Weaver (2002:5). Their results confirm that either very high or very low levels of hostility as being associated with low levels of risk-taking. This is similar to the outcome of another study on risk-taking and the adverse conditions of international scope by Dia, Maksimov, Gilbert and Fernhaber (2014:517). Their results indicate that risk-taking is highest at moderate levels of hostility, and lowest in extremely hostile or munificent environments. Hence in this study, it hypothesised that:

> ***H_{10}: Environmental hostility has a positive relationship with small business risk-taking.***

Rauch *et al.'s* (2009), meta-analysis of 37 empirical studies indicates a less definitive relationship between risk-taking and performance. On the one hand, the ability to assume risk enables a firm to take on investment projects with less predictable results and such projects do not necessarily have to provide a substantial improvement in profits. However, if management's organisational capabilities are taken to be constant and the risk of any business activity is considered a general risk affecting all firms, then it would seem logical that those

firms capable of taking on higher risk projects will tend to reap a larger reward in the form of better performance. Nickel and Rodriguez (2002:1) as well as Hans (2013:877) argue in favour of a positive relationship between risk and return. In this sense, Lumpkin and Dess (1996:114) note that firms with an entrepreneurial orientation are often typified by risk-taking behaviour, such as incurring heavy debt or making large resource commitments in the interest of obtaining high returns. Lotz and van der Merwe (2013:19) attest to the obscurity of the relationship between risk-taking and growth by elaborating on Wiklund and Shepherd's (2005:75) argument that, while reliable strategies may lead to high performance, risky strategies may lead to performance variation since some projects fail while others succeed. Naldi, Nordqvist, Sjoberg and Wiklund (2007:41) focus on risk-taking and its impact on performance in Swedish family firms and found that entrepreneurial risk-taking is negatively related to performance. On the contrary, Fairoz and Hirobumi (2016:68) found a positive relationship between risk-taking and employment growth amongst SMEs in Japan. Against this background, in this study it is hypothesised that:

H_{11}: ***Small business risk-taking has a positive relationship with employment growth.***

In more dynamic environments, a higher risk propensity of the firm should lead to the adoption of decisions with a higher impact on the growth of the business than would be the case in stable environments (Moreno & Casillas, 2008:512; Ambad & Wahab, 2013:99). In dynamic environments, businesses that assume higher risks will be capable of exploring a wider variety of potential opportunities and exploiting those opportunities that seem to offer higher possibilities for growth. This is especially prominent in the case of small businesses because they tend to show aversion to risk compared with larger businesses (Kreiser & Davis, 2010:44). Therefore, those decisions orientated to stimulate fast growth, although entailing some level of risk, will be more effective when the environment is in a process of change and the firm's competitive position requires to be maintained.

On the contrary, in stable environments businesses may perceive fewer opportunities that drive growth and alter their risk propensity and will tend to adopt measures unrelated to the businesses themselves. For example, investments in

different sectors, improvements in efficiency and profitability, financial investments, avoid putting the core traditional business in jeopardy.

Considering risk-taking, and growth, two arguments endorse the moderating role of the hostile environment. Firstly, in very hostile environments, there tends to be intense competition that occurs among businesses to grow or to keep their competitive position. In this type of environment, it is logical to think that businesses with greater risk aversion will be attacked by their more aggressive competitors, eroding the possibilities of growth for the first group in favour of the second one. Secondly, it is to be expected that small businesses in more hostile environments will put the objective of survival before that of growth. According to Naldi, Nordqvist, Sjoberg and Wiklund (2007:37) as well as Zahra (2005:25), small businesses that are risk averse will obtain a lower rate of growth than those small businesses with a risk orientation. For these reasons this study proposes that:

> ***H_{12}: Environmental dynamism and hostility will moderate the relationship between small business risk-taking and employment growth.***

4.7 THE NEXUS OF ENVIRONMENT, COMPETITIVE AGGRESSIVENESS AND EMPLOYMENT GROWTH

Lumpkin and Dess (1996:148) define “competitive aggressiveness” as a firm’s propensity to challenge its competitors directly and intensely to achieve entry or improve position, that is, to outperform industry rivals in the marketplace. They go further to argue that competitive aggressiveness entails a combative and forceful approach toward rivals through pre-emptive actions and aggressive responses to attacks (Lumpkin & Dess, 2001:431). Put simply, it is an incessant race to get and stay ahead and the ultimate goal for taking competitive actions is to gain an advantage over industry rivals. They assert that such behaviour is more consistent with exploitation and more feasible in a stable environment than in a dynamic setting. Nevertheless, Nadkarin, Chen and Chen (2016:1132) examined the relationship between “industry velocity” (which is synonymous with “environmental dynamism”), competitive aggressiveness and firm performance and found that competitive aggressiveness has a positive effect on performance. However, this

effect was stronger in high-velocity industries than in low-velocity industries. Therefore, in this study it is hypothesised that:

> ***H_{13}: Environmental dynamism has a positive relationship with small business competitive aggressiveness.***

Since hostile environments are known for precarious industry settings, intense competition and lack of exploitable opportunities (Zahra & Garvis, 2000:475; Tang & Hull, 2012:133; Bratnicka, 2014:61), small firms seek to minimise the risks associated with operating in such environments by assuming conservative competitive postures (Covin & Covin, 1990:38). Furthermore, small firms often have limited resources and capabilities to survive poor managerial decisions (Brends, Jelinek, Reymen & Stultiens, 2014:616). The costs associated with such decisions are often greater in hostile environments since they expose firms to much higher levels of risk. In addition, competitor responses to aggressive action are generally less predictable than their responses to passive action (Oliveira, 2015:156). Thus, small firms' viability may be secured best by adopting more passive competitive postures within hostile conditions.

However, empirical evidence suggests that competitive aggressiveness may be related positively to environmental hostility. Hall (1980:77) concluded that successful strategies come from purposeful moves toward leadership positions in a study of sixty-four firms operating across eight hostile industry environments. Similarly, Miller (1983:229) found that innovation rather than conservatism seemed to be a common response to hostility among successful firms. However, the opposite was true for unsuccessful firms.

Of greater relevance to the current discussion is the possibility that competitive aggressiveness may be related positively to environmental hostility in small firms. Considering the paucity of product-market opportunities and the need to defend industry position vigorously in hostile environments small firms often realise their goals only through aggressive stances (Covin & Covin, 1990:38; Covin & Slevin 1989:81; Khedhaouria, Gurau, Torres, 2015:490). Although reluctant to assume the risk associated with competitive aggressiveness in hostile environments, they may not be able to survive otherwise. Desperate circumstances can call for desperate

measures and small, high-performing firms may realise better than their low-performing counterparts the need to compete aggressively in hostile environments.

Consistent with these arguments, Covin and Slevin (1989:81) found that small firms in hostile environments generally performed best when they demonstrated a high level of competitive aggressiveness. Lumpkin and Dess (2001:437) opine that the discipline required to compete successfully in a hostile environment would be consistent with a competitively aggressive posture and their hypothesis, which postulates a positive relationship between the two, was found to be supported. These positions influence this study to hypothesise that:

H_{14}: Environmental hostility has a positive relationship with small business competitive aggressiveness.

Although competitive aggressiveness and pro-activeness are considered closely related, they are distinct dimensions of EO (Lumpkin & Dess, 1996; 2001). According to Lotz and van der Merwe (2013:20), pro-activeness is about how a business relates to market opportunities by seizing initiative and acting opportunistically in order to shape the environment, influence trends and perhaps even create demand. Whilst “pro-activeness” considers how businesses respond to trends and demand that exist in the marketplace, “competitive aggressiveness” refers to how businesses relate to competitors (Lotz & van der Merwe, 2013:20).

Lumpkin and Dess (2001:434) posit that “pro-activeness” is a response to opportunities, whereas “competitive aggressiveness” is a response to threats. While pro-activeness relates to exploration, competitive aggressiveness is more closely related to exploitation, so that entrepreneurial firms first demonstrate a pro-active attitude seeking out an attractive niche and then, once they have established it, they seek to protect it through competitive aggressiveness. It is noteworthy that Lumpkin and Dess (1996:139) introduced this dimension to EO and explained it as being characterised by responsiveness and reaction to demands of the marketplace. It is stressed that competitive aggressiveness is geared more towards consolidating an already attained competitive position than a new position or competitive edge.

Lumpkin and Dess (2001:431) observe that competitive aggressiveness has been investigated less frequently so less is known of its association with either growth or

performance. Moreover, Casillas and Moreno (2010:284) argue that competitive aggressive behaviour is less of a strategy orientated toward firm growth. In their opinion it is a reactive behaviour to competitors in defence of market position. Consistent with their view, they found no relationship between competitive aggressiveness and growth in their study.

le Roux and Bengesi (2014:4) seem to concur that competitive aggressiveness implies a tendency to challenge competitors to achieve entry or improve their competitive position to outperform industry rivals in the marketplace. They state that in an open-market economy, where SMEs operate freely and customers are exposed to a wide range of products, tastes and preferences, a competitive aggressive posture might be relevant to attain and protect a competitive market position. This corroborates the notion that competitive aggressiveness is more of a response to rivals' competitive threats than a posture to defend their own competitive advantage or secure new competitive advantage over rivals. Their study asserts that competitive aggressiveness is a reactive measure that may not enhance growth directly although it can contribute to overall firm performance. This argument leads to the formulation of the hypothesis that:

> ***H_{15}: Small business competitive aggressiveness has a negative relationship with employment growth.***

Under dynamic conditions, exploitation (which implies the implementation and strengthening of an existing resource base) may be more relevant than exploration. Thus, reaction to competitive conditions would be facilitated in a stable and certain environment where "the rules of the game" are evident and unchanging. Adaptation and reaction are more difficult if one needs to pursue the constantly moving target associated with a dynamic and uncertain environment. Hence it is more reasonable to associate a firm's competitive aggressiveness with growth under increasing dynamism.

However, in a hostile environment competitive aggressive behaviour can foster growth. For example, firms within intensely competitive industries which are fragmented in nature may require decentralisation that would be monitored closely as well as strategic discipline in resource control. The absence or limited opportunities and the tendency to tolerate organisational slack becomes more

obvious since decision-making and strategic options are quite limited. Consequently, the decisions and activities associated with the strategic discipline required to compete successfully within a hostile environment are consistent with a competitively aggressive posture. Therefore, this study proposes that:

H_{16}: Environmental dynamism and hostility will moderate the relationship between small business competitive aggressiveness and employment growth.

4.8 THE NEXUS OF ENVIRONMENT, AUTONOMY AND EMPLOYMENT GROWTH

Irrespective of the limited application and minimal number of studies available for evaluating autonomy in the literature (Magaji, Baba & Entebanga, 2017:30) this study has chosen to include it in its assessment of EO. “Autonomy” refers to the independence of actions and decision-making by individuals or teams towards bringing forth a concept or vision and carrying it through to completion (Lumpkin & Dess 2001:431). Autonomy is more of a catalyst to entrepreneurial activity (Alexandrova, 2004:141) as it affords organisational members the freedom and flexibility to develop and enact entrepreneurial initiatives. It is the independent spirit that seeks the freedom to explore new opportunities and take risks that create new ventures. However, entrepreneurial individuals and teams could not operate in this manner without an environment that promotes independent economic behaviour and seeking out of opportunities (Lumpkin *et al.,* 2009:47). This could be more feasible in a dynamic environment which is subject to rapid changes in itself and possesses a higher propensity for opportunities than stable environments. Hence in this study, it is hypothesised that:

H_{17}: Environmental dynamism has a positive relationship with small business autonomy.

Coulthard (2007:29) identified autonomy as a vital factor in improving the performance of a business across different industries. Also, researchers – such as Kusumawardhani, McCarthy and Perera (2009), Covin *et al.* (2006:49); Rauch *et al.* (2009:764) – are of the opinion that when employees are given the leverage of independence in decision making, they will be sensitised to act entrepreneurially and thus will help to enhance the performance of the business. Lumpkin and Dess

(1996:140) described autonomy as the ability and will to be self-directed in the pursuit of opportunities and emphasised it as a key dimension of entrepreneurial action. In the context of strategic entrepreneurship, autonomy enables both opportunity-seeking and advantage-seeking behaviours (Ireland *et al.,* 2003:965). Thus, autonomous individuals or teams are motivated to act and make decisions independently in highly competitive environments in order to foster innovation and take advantage of the limited opportunities. This could increase the chances of entrepreneurial success, because self-direction allows quick and self-reliant decisions. Hence, in this study, the following hypothesis is postulated:

H_{18}: ***Environmental hostility has a positive relationship with small business autonomy.***

Amongst the dimensions of EO, autonomy is the one that has been least studied from both the theoretical and empirical point of view. This is because of its latter inclusion and suggestions that it is an antecedent of EO rather than a component (Lumpkin *et al.,* 2009:48). The adoption of autonomy has been further impeded by the lack of a valid measure from an EO perspective. (Lumpkin *et al.,* 2009:48). Therefore, the association between growth and autonomy leaves much room for clarity.

On the one hand, one of the main sources of growth for small and medium enterprises (SMEs) is their ability to enter into agreements and to provide an increase in resources and capacities without having to possess them (Liming & Aram 1995:359; Moreno & Casillas 2007:80). On the other hand, autonomy constitutes a basis for innovativeness which augments entrepreneurial behaviour. Burgelman (1983:1350) posits that entrepreneurship requires a degree of autonomous strategic behaviour as a unique way to generate radically new combinations of productive resources. This suggests that autonomous strategic behaviour is conceptually equivalent to entrepreneurial activity – generating new combinations of productive resources in the firm. Burgelman (2001:44), asserts that the independent spirit and freedom of action necessary to advance new venture development is a driving force of entrepreneurial value creation. Therefore, organisations that rely on EO to create new value and grow must make an extra effort to foster independence as an entrepreneurial behaviour.

This often involves freeing their people – both as individuals and teams – to operate beyond the organisation's existing boundaries. This will allow them the opportunity to think and act more independently. In the context of EO, autonomy is essential to the processes of leveraging a firm's existing strengths, identifying opportunities that are beyond the organisation's current capabilities, and encouraging the development of new ventures and/or improved business practices (Lumpkin *et al.,* 2009:49). Independent entrepreneurial action provides the impetus needed to explore business opportunities, bring forth business concepts and carry them through to completion (McMullen & Shepherd, 2006:143). Decision making by individuals or teams who are unhindered by strategic norms or organisational traditions that may impede them is necessary to investigate entrepreneurial possibilities effectively and champion new venture concepts.

Prior research supports the view that, within organisations, autonomy encourages innovation, promotes the launching of entrepreneurial ventures, and increases the competitiveness and effectiveness of firms (Brock, 2003; Burgelman, 2001). In contrast, firms that are overly dependent on participativeness in decision making and require consensus to be reached before launching entrepreneurial initiatives may suffer financially (Covin, Green, & Slevin, 2006:60). Based on the arguments above, researchers tend to defend a positive relationship between autonomy and growth (Casillas & Moreno, 2010:271), a stance which has been supported by Lotz and van der Merwe (2013:26). Hence, this study hypothesises that:

> ***H_{19}: Small business autonomy has a positive relationship with employment growth.***

Autonomous decision-making and action provide a vital avenue for achieving strategic advantages and entrepreneurial outcomes, even though it has received less attention in EO research (Lumpkin *et al.,* 2009:65). Autonomy from an EO perspective refers primarily to strategic autonomy (Lumpkin & Dess, 1996; Lumpkin *et al.,* 2009:50). These higher levels or strategic dimensions of autonomy enable a team or individual to solve problems rapidly in order to gain an edge over competitors. They are useful for providing innovative solutions in the face of market opportunities that can enhance performance or growth (Li, Huang & Tsai, 2009:442). In a dynamic environment with rapid changes and increased industry opportunities,

independent actions from teams or individuals within the firms may be required, if pro-active innovation is to be implemented effectively. Findings from a recent study (Zheng, 2017) show that autonomous firms that encourage organisational flexibility are positioned best to exploit opportunities (which consequently enhances firm performance) in highly dynamic environments. However, increased autonomy may lead to misuse of independence in less dynamic environments to impact performance negatively.

Describing the role of autonomy in firm performance in a hostile environment, Uddin, Bose and Yousof (2015:348) studied this relationship in the context of SMEs in Bangladesh. Findings from this study reveal a negative relationship between autonomy and performance amongst SMEs in Bangladesh. It is argued that the exercise of firm-level autonomy entails independence by individuals or teams for management decision making and use of company resources. Since employees of SMEs within this environment have limited skills and education (that is, a shortage of human resources) autonomous decision-making cannot lead to higher performance. This corroborates Zheng's (2017) finding that independence in decision making can benefit firms only in highly opportunistic and well-resourced environments. Hence this study proposes that:

> ***H_{20}: Environmental dynamism and hostility will moderate the relationship between small business autonomy and employment growth.***

4.9 CONCEPTUAL MODEL OF THE STUDY

Based on these arguments and the twenty hypotheses identified, a conceptual model for this study is presented in Figure 4.1.

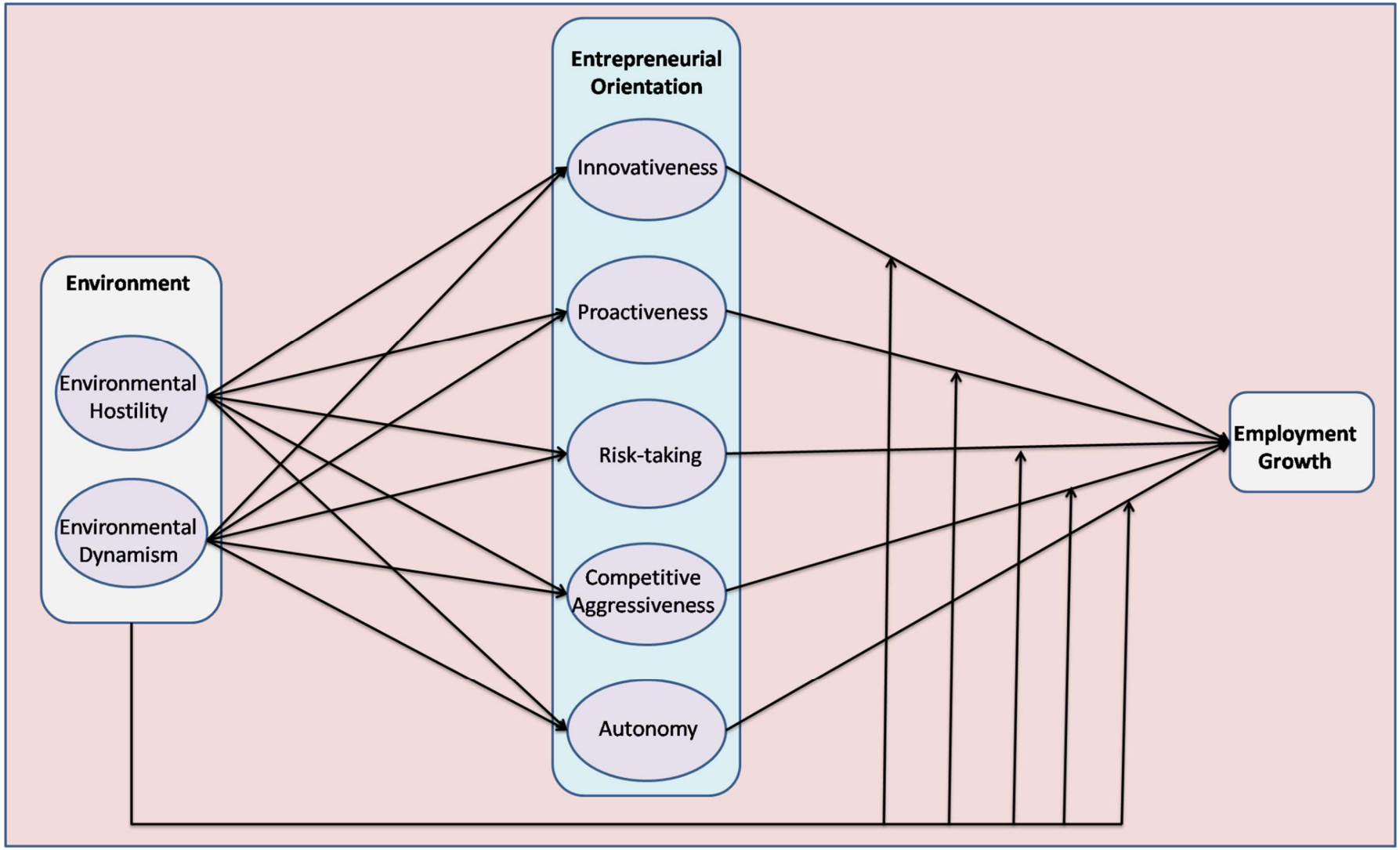

Figure 4.1: Conceptual model of the study

In this model, the five dimensions of EO are shown to be dependent on environmental hostility and dynamism. Employment growth is postulated as dependent on the dimensions of EO.

In addition, a combination of environmental hostility and dynamism is hypothesised as moderating the relationships between each of the dimensions of EO and employment growth. This inter-relationship between these constructs as shown in the model is consistent with the objectives of this study which will be further examined through an empirical approach.

4.10 CHAPTER SUMMARY

This chapter has emphasised the environment as an antecedent of EO and EO as a predictor of employment growth. It has also considered the moderating role of two environmental variables – dynamism and hostility – on the relationships between the individual dimensions of EO (namely, innovateness, pro-activeness, risk-taking, competitive aggressiveness, and autonomy) and employment growth.

The phenomenon of small firm growth and growth in employment has been elaborated. From this review, it can be inferred that, although the EO-performance relationship is being investigated in entrepreneurship research, less effort has been directed at employment growth at the micro level which is the gap that this study seeks to address. This review directs attention to the plausibility that employment growth is dependent on the five dimensions of EO. Furthermore, an understanding of the moderating roles of dynamism and hostility on the relationship between the dimensions of EO and employment growth is yet to be fully comprehended. In an attempt to contribute to the body of knowledge in this regard, twenty hypotheses have been formulated and a conceptual model (Figure 4.1) presented linking these constructs together. This will serve as a basis to probe support (or lack thereof) empirically for the hypotheses that have been identified. A clear description of the scientific approach to be undertaken in this study is needed, hence the research methodology discussed in Chapter 5.

CHAPTER 5
RESEARCH DESIGN AND METHODOLOGY

5.1 INTRODUCTION

Research design constitutes the general plan or blueprint for conducting research (Mouton, 2011:55; Saunders, Lewis & Thornhill, 2016:163; Cooper & Schindler, 2014:125). It expresses the research problem, the framework, organisation or configuration of the relationship among variables in a study and the plan of investigation used to obtain empirical evidence about those relationships. The research design also addresses issues relating to data collection, measurement and analysis. Whilst research design and research methods are often considered as the same concept and used interchangeably, Mouton (2011:55) contends that they are two different aspects of a research process. On the one hand, “research design” is premised on the research problem and focuses on the kind of study being conducted and for what purpose. On the other, “research methodology” is informed by specific research tasks and concerned about the procedures involved and techniques to be employed (Rajasekar, Philominathena & Chinnathembi, 2013:1).

This chapter is concerned with the design and methodology used to examine empirically the relationships between dynamism and hostility of the environment, the dimensions of entrepreneurial orientation (EO) and employment growth. It also entails the moderating roles of environmental hostility and dynamism on the relationship between these dimensions and employment growth. As a point of departure, this chapter reiterates the intention of the study and outlines its objectives. It goes further to present the preferred methodological approach for this study and the methods applied at specific stages of the study.

Furthermore, this chapter discusses the overarching research philosophy of this study, presenting its ontological and epistemological positions. Using specific design descriptors, it presents details of the research and justifies the use of a quantitative methodological approach and survey method. In addition, it delineates the measurement instrument, pilot study sampling design, data collection and

analysis techniques used in this study. It concludes with ethical considerations observed in the course the study.

5.2 RESEARCH OBJECTIVES AND HYPOTHESES

Within the context of South African SMMEs this study seeks to elucidate the relationships between the environment and the dimensions of EO. It intends to shed light on the relationships between dynamism and hostility of the environment and innovativeness, pro-activeness, risk-taking, competitive aggressiveness and autonomy. It goes further to examine the relationship between them and employment growth both directly and as contingent on hostility and dynamism of the environment. On that account, it has a primary research objective and secondary research objectives.

5.2.1 Primary Objective

The primary objective of this research is to examine the relationships between the business environment in terms of hostility and dynamism, the dimensions of entrepreneurial orientation (EO) and employment growth amongst SMMEs in South Africa.

5.2.2 Secondary Objectives

Five secondary objectives have been identified for this study and are presented in Table 5.1. The objectives are based on the multi-dimensional conceptualisation of EO as adopted in this study and the table shows the dis-aggregated research objectives and how they relate to the research hypotheses identified in Chapter 4.

Table 5.1: Relationship between the secondary research objectives and hypotheses

Secondary Research Objectives	Disaggregated Secondary Research Objectives	Hypotheses
1: To examine the nexus of relationships between the environment, small business **innovativeness** and employment growth.	To examine the relationship between small business innovativeness and environmental dynamism.	***H_1***: *Small business innovativeness has a positive relationship with environmental dynamism.*
	To examine the relationship between small business innovativeness and environmental hostility.	***H_2***: *Small business innovativeness has a negative relationship with environmental hostility.*
	To examine the relationship between small business innovativeness and employment growth.	***H_3***: *Small business innovativeness has a positive relationship with employment growth.*
	To examine the moderating role of dynamism and hostility on the relationship between small business innovativeness and employment growth.	***H_4***: *Environmental dynamism and hostility will moderate the relationship between small business innovativeness and employment growth.*

Secondary Research Objectives	Disaggregated Secondary Research Objectives	Hypotheses
2: To examine the nexus of relationships between the environment, small business **pro-activeness** and employment growth.	To examine the relationship between small business pro-activeness and environmental dynamism.	***H_5***: *Small business pro-activeness has a positive relationship with environmental dynamism.*
	To examine the relationship between small business pro-activeness and environmental hostility.	***H_6***: *Small business pro-activeness has a positive relationship with environmental hostility.*
	To examine the relationship between small business pro-activeness and employment growth.	***H_7***: *Small business pro-activeness has a positive relationship with employment growth.*
	To examine the moderating role of dynamism and hostility on the relationship between small business pro-activeness and employment growth.	***H_8***: *Environmental dynamism and hostility will moderate the relationship between small business pro-activeness and employment growth.*

Secondary Research Objectives	Disaggregated Secondary Research Objectives	Hypotheses
3: To examine the nexus of relationships between the environment, small business **risk-taking** and employment growth.	To examine the relationship between small business risk-taking and environmental dynamism.	***H_9***: *Small business risk-taking has a positive relationship with environmental dynamism.*
	To examine the relationship between small business risk-taking and environmental hostility.	***H_{10}***: *Small business risk-taking has a positive relationship with environmental hostility.*
	To examine the relationship between small business risk-taking and employment growth.	***H_{11}***: *Small business risk-taking has a positive relationship with employment growth.*
	To examine the moderating role of dynamism and hostility on the relationship between small business risk-taking and employment growth.	***H_{12}***: *Environmental dynamism and hostility will moderate the relationship between small business risk-taking and employment growth.*

Secondary Research Objectives	Disaggregated Secondary Research Objectives	Hypotheses
4: To examine the nexus of relationships between the environment, small business **competitive aggressiveness** and employment growth.	To examine the relationship between small business competitive aggressiveness and environmental dynamism.	H_{13}: *Small business competitive aggressiveness has a positive relationship with environmental dynamism.*
	To examine the relationship between small business competitive aggressiveness and environmental hostility.	H_{14}: *Small business competitive aggressiveness has a positive relationship with environmental hostility.*
	To examine the relationship between small business competitive aggressiveness and employment growth.	H_{15}: *Small business competitive aggressiveness has a negative relationship with employment growth.*
	To examine the moderating role of dynamism and hostility on the relationship between small business aggressiveness and employment growth	H_{16}: *Environmental dynamism and hostility will moderate the relationship between small business competitive aggressiveness and employment growth.*

Secondary Research Objectives	Disaggregated Secondary Research Objectives	Hypotheses
5: To examine the nexus of relationships between the environment, small business **autonomy** and employment growth.	To examine the relationship between small business autonomy and environmental dynamism.	H_{17}: *Small business autonomy has a positive relationship with environmental dynamism.*
	To examine the relationship between small business autonomy and environmental hostility.	H_{18}: *Small business autonomy has a positive relationship with hostility.*
	To examine the relationship between small business autonomy and employment growth.	H_{19}: *Small business autonomy has a positive relationship with employment growth.*
	To examine the moderating role of dynamism and hostility on the relationship between small business autonomy and employment growth.	H_{20}: *Environmental dynamism and hostility will moderate the relationship between small business autonomy and employment growth.*
Source: Author's own compilation		

5.3 RESEARCH PARADIGM

Research philosophy refers to the conceptual background underpinning the search for knowledge (Ponterotton, 2005:127). According to Tuli (2010:99), the selection of a research method depends on the paradigm that guides the research process. Specifically, it is the belief about the nature of reality and humanity as well as the theory of knowledge that informs the research. Furthermore, it considers how that knowledge may be gained. Hence ontology, epistemology and methodology are relevant to debates in social science research as these elements provide structure and definition to the conduct of an inquiry.

Ontologyis the starting point of all research, after which one's epistemological and methodological positions follow logically. Ontology can be described as the image of social reality upon which a theory is based. Blaikie (2000:8) suggests that ontological stances are claims and assumptions that are made about the nature of social reality, perceptions of about what exists, what it looks like, what units make it up and how these units interact with each other. In short, ontological assumptions are concerned about the nature of social reality (Tuli, 2010:101).

Examples of ontological positions are those contained within the perspectives of objectivism and constructivism. Bryman (2001:16) asserts:

> “objectivism” is an ontological position that asserts that social phenomena and their meanings can exist independent of social actors. “Constructivism” in contrast, is an alternative position that asserts that social phenomena and their meanings are continually being accomplished by social actors. It implies that social phenomena and categories are not only produced through social interaction but that they are in a constant state of revision.

Hence the ontological position assumed by a researcher will affect the manner in which the research will be undertaken.

Whilst ontology is about what can be known, epistemology is about how it can be known. Epistemology is concerned with the theory of knowledge in regard to its methods, validation and the possible ways of gaining knowledge of social reality. Put simply, it addresses how what is assumed to exist can be known (Blaike, 2000:8).

Tuli (2010:99) identifies two contrasting epistemological positions each contained within the perspectives of positivism and interpretivism-constructivism. He describes positivism as an epistemological position that sees social science as an organised method for combining deductive logic with precise empirical observations of individual behaviour. This is done with the intent of discovering and confirming a set of probabilistic causal laws that can be used to predict general patterns of human activity. On the contrary, the interpretivism-constructivism perspective sees the world as constructed, interpreted, and experienced by people in their interactions with each other and with wider social systems. In addition, Bryman (2012:12), describes intrepretivism as a position that advocates the need for a strategy that respects the differences between people and the objects of the natural sciences and therefore requires the social scientist to grasp the subjective meaning of social action.

These epistemological positions will lead a researcher to employ different methodologies. A researcher with a positivist orientation regards reality as already existing and needing to be discovered using conventional scientific methodologies (Tuli, 2010:101). Positivist researchers do not regard themselves as important variables in their research and therefore remain detached from what they research. The philosophical basis is that the world exists and is knowable and researchers can use quantitative methodology to discover it (Cohen, Manion & Morrison, 2000:71). Through this orientation, knowledge is a given and must be studied using objective methods. Research findings are usually represented quantitatively in numbers which speak for themselves (Mutch, 2005:17).

As regards ontology, this study adopts an objectivistic position; as firm-level phenomena (such as entrepreneurial orientation, business environment and employment growth) are considered independent of other social actors. Furthermore, this study is considered to have a positivistic approach (epistemological position) as it holds that only observable phenomena provide credible data and generate facts. Another indication of a positivistic stance is that the methods of inquiry in this study are entirely those of the natural sciences which lead to the adoption of an exclusively quantitative approach. The specific methods will require data collection through the use of standardised instruments and models through

which the phenomena being studied will be measured. As already shown, it entails developing research hypotheses and it will involve the use of statistical data analysis techniques. Subsequent sections in this chapter elaborate on this. Table 5.2 presents these building blocks of research as adopted in this study.

Table 5.2: Constituents of the research paradigm

Research Position	Description	Questions being asked	Positions adopted in this Study
Ontology	The nature of social reality	What's out there to know?	Objectivism
Epistemology	The theory of knowledge and how it can be gained	What and how can we know about it?	Positivistic
Methodology	The scientific approach employed in gaining knowledge	How best can knowledge be acquired and validated?	Quantitative
Methods	The techniques to be employed in acquiring information	What precise procedures can be used to acquire it?	Numeric data collection through use of standardised instruments; statistical data analysis.
Source: Grix (2002:180) and Author's own compilation			

5.4 RESEARCH DESIGN

The research design is a master plan that specifies the methods and procedures for collecting and analysing required information. It provides a framework for a research project. In this study it is based on the research problem, philosophy, objectives and hypotheses which have been outlined in the previous sections (Zikmund, Babin, Carr & Griffin, 2013:64; Bryman, 2012:46).

5.4.1 Research Design Descriptors

Cooper and Schindler (2014:126) classify research design using different descriptors. Each of these descriptors is discussed in this section. Table 5.3 summarises the research design descriptors and identifies those that depict this study.

5.4.1.1 Degree to which the research question is crystallised

A study may be viewed as “exploratory” or “formal”. The degree of structure and the immediate objective of the study differentiate the two types from each other. Exploratory studies tend to be loose in their purpose and are usually to develop hypotheses or questions for further research. They are useful when researchers lack a clear idea of the problems they will meet during the study. The formal study commences where the exploratory study ends (Cooper & Schindler, 2014:126). This is a formal study as there is a definitive research question and it entails specific procedures in reaching its findings. However, Moos (2014:172) notes that all studies have an element of exploration in them which implicitly includes this study.

5.4.1.2 Method of data collection

This descriptor classifies studies into communication and monitoring processes. Whilst monitoring studies are concerned with activities of subjects or nature of some material without attempting to elicit any responses, communication studies elicit responses from subjects either through personal or impersonal means. In this study information is collected through questionnaires from entrepreneurs, small business owners and managers, making it a communication study.

Table 5.3: Descriptors of the research design and justification for the study

Descriptors	Alternatives	Option and Justification for this Study
Degree to which Research Question is Crystallised	• Exploratory • Formal Study	A formal study is explored as it intends to test hypothesised relationships
Method of Collection	• Monitoring Study • Communication Study	In this study, an existing database was available and respondents easily reachable. Hence data was collected electronically making it a communication study
Researcher Control of Variables	• Experimental Design • *Ex post facto* Study	The researchers did not intend to influences the variables in anyway hence an e*x post facto* approach was utilised.

Purpose of Study	• Reporting
	• Descriptive
	• Causal
	  ○ Explanatory
	  ○ Predictive
		In this study the environment plays and explanatory role in predicting the EO of small business and the EO does the same for employment growth. Hence this is a causal explanatory study.

Time Dimension	• Cross-Sectional • Longitudinal Study	Since the study was carried out at once and data is reflective of a single snap shot this makes it cross-sectional in nature.
Topical Scope	• Case • Statistical Study	In meeting the study objectives, it is necessary to capture the population characteristic by making inferences from the sample. In addition, hypotheses can be tested quatitiatively. Therefore, a statistical approach was utlised.
Research Environment	• Field Setting • Laboratory Setting • Simulation	This study reached out to prospective respondents in field setting.
Participants' Perceptual Awareness	• Actual Routine • Modified Routine	It is necessary that respondents to the study be aware of what is being measured. Hence this study is considered as actual routine.
Source: Cooper and Schindler (2014:126)		

5.4.1.3 Researcher's control of variables

In terms of the researcher's ability to manipulate variables, Cooper and Schindler (2014:127) differentiate between experimental and *ex post facto* designs. For an experiment the researcher attempts to control and/or manipulate the variables in the study, the assumption being that experimentation provides a logical support for hypotheses of causation. With an *ex post facto* design, investigators have no control over the variables in the sense of being able to manipulate them. With this approach it is conditions that have already occurred or are occurring currently that are being assessed. The researcher collects data to investigate a possible relationship between these conditions and particular characteristics or behaviour (Leedy & Ormrod, 2015:102). Hence this study is described as an *ex post facto* design as it examines the EO of SMMEs, their perception of dynamism and hostility in the environment and their employment growth without any manipulation by the researcher.

5.4.1.4 Purpose of the study

The essential differences between the various classes in this grouping; consisting of reporting, descriptive and causal-explanatory or causal-predictive lie in their objectives (Cooper & Schindler, 2014:127). The purpose of this study is causal in nature as there are independent variables (IV), moderating variables (MV) and dependent variables (DV) in this relationship. As shown in Figure 4.1, the conceptual model of this study, it examines hostility and dynamism in relation to the dimensions of EO and investigates the direct and moderated relationships between them and employment growth. Therefore, this study is causal-predictive in nature.

5.4.1.5 Time dimension

Cooper and Schindler (2014:128) define a cross-sectional study as one that is carried out once and represents a "snapshot" of one point in time. Longitudinal studies are represented over an extended period. This is not the case in this study as the phenomena being studied are examined at one point in time, making it a cross-sectional study.

5.4.1.6 Topical scope

As observed by Cooper and Schindler (2014:128) statistical studies are devised for breadth rather than depth and the hypotheses developed are tested quantitatively. In a statistical study, the researcher attempts to capture a population's characteristics by making inferences from sample characteristics. Generalising about the findings of statistical studies is based on the representativeness of the sample and the validity of the design. Case studies, in contrast, are a type of qualitative research in which in-depth data are gathered relative to a single individual, programme or event for the purpose of learning about an unknown or poorly understood situation (Leedy & Ormrod, 2015:102). Therefore, the topical scope of this study is based on a statistical study and not a case study.

5.4.1.7 Research environment

The "research environment" refers to whether studies are conducted under actual environment conditions (field conditions) or under staged or manipulated conditions (laboratory conditions) (Cooper & Schindler, 2014:128). This is a field study of small, medium and micro enterprises across the nine provinces of South Africa.

5.4.1.8 Participant perceptual awareness

Participant perceptual awareness can influence response behaviour in a study. Cooper and Schindler (2014:129) emphasise that the usefulness of a design may be reduced when the people involved a study perceive that research is being conducted and this can influence the outcome to different degrees. Since the respondents in this study were made aware of this research and its objectives, they might have answered the questions posed according to what is socially acceptable. Therefore, it is noted that respondents to this study might have adapted their response behaviour.

5.4.2 Comparing Quantitative and Qualitative Methodologies

Although this study takes a quantitative approach, in addressing its research objectives this section will shed light on it as compared with a qualitative approach.

Beyond that this section leads to the justification for the use of a quantitative approach.

Leedy and Ormrod (2015:98) observe that quantitative and qualitative approaches involve similar processes. They both entail identifying a research problem, a theoretical underpinning, research question or objectives, collection and analysis of data. However, they emanate from different philosophical schools of thought (Tuli, 2010:104) and are suitable for different types of data. Table 5.4 presents typical differences between quantitative and qualitative approaches to research.

The objective in quantitative methodologies is usually to identify relationships among two or more variables and, based on the findings, confirm or modify existing theories or practices such as is the case in this study. Qualitative studies tend to seek understanding through detailed description. This approach may be used to build theory from the ground upwards but rarely test it (Cooper & Schindler, 2014:146). Since all research requires logical reasoning, the collected data must be analysed for interpretation. Quantitative research relies on deductive reasoning which would often commence on certain premises such as hypotheses and theories from which logical conclusions are drawn.

In contrast, qualitative researches make considerable use of inductive reasoning (Saunder, Lewis & Thornhill, 2016:145). Data analyses in quantitative procedures require many statistical and mathematical procedures so researcher input is minimal whilst the researcher is more involved in qualitative studies. The methods used compel the researcher to scrutinise the contextual framework of the phenomenon being measured and to distinguish between facts and judgements (Cooper & Schindler, 2014:147).

Leedy and Ormrod (2015:100) observe that quantitative research is not exclusively deductive, nor is qualitative research exclusively inductive. Research of all methodological persuasions typically uses both types of reasoning in a continual and cyclical fashion (Saunders *et al.,* 2016:149). Quantitative research might formulate a preliminary theory through inductive reasoning by observing a situation, engage in a theory-building process and then try to support their theory by drawing

Table 5.4: Characteristics of quantitative versus qualitative methodologies

Question	Quantitative	Qualitative
What is the purpose of the research?	• To explain and predict • To confirm and validate • To test theory	• To describe and explain • To explore and interpret • To build theory
What is the nature of the research process?	• Focused • Known variables • Established guidelines • Pre-planned methods • Context-free • Detached view	• Holistic • Unknown variables • Flexible guidelines • Emergent methods • Context-bound • Personal view
What are the data like, and how are they collected?	• Numerical data • Representative sample • Standardised Instrument	• Textual or image-based data • Informative small sample • Loosely structured or non-standardised observations and interviews
How are data analysed to determine their meanings?	• Statistical analysis • Stress on objectivity • Primarily deductive reasoning	• Search for themes and categories • Analysis is subjective and potentially biased • Primarily inductive reasoning
How are the findings communicated?	• Numbers • Statistics, aggregated data • Formal voice, scientific style	• Words • Narratives, individual quotes • Personal voice, literary style
Source: Leedy and Ormrod (2015:99).		

and testing the conclusions that follow logically from it. Similarly, qualitative research can identify a theme in their data using an inductive process and then move into a more deductive mode to verify or modify it.

In terms of how their findings are reported, quantitative research will typically reduce its data to summarising statistics and its results presented in reports that use a format, scientific style with impersonal language. On the contrary, qualitative research often constructs interpretive narratives from their data and tries to capture the complexity of a particular phenomenon. A quantitative methodological approach is adopted in this study and the basis for this standpoint is discussed in the following section.

5.4.3 Justification for a Quantitative Approach and Survey Method

Based on the research objectives identified for this study and the hypotheses generated subsequently an objectivistic ontological position is assumed which informs a positivistic school of thought. Following the logical pattern presented by Grix (2002:180), a quantitative methodology is consistent with positivism. This objectivity is shown in the use of numeric data, standardised instruments and statistical techniques in data analysis.

In addition, seminal studies on entrepreneurial orientation have been largely quantitative in nature (Rauch *et al.,* 2009:768-773; Wales *et al.,* 2013; Wales, 2016:13). This features in the earliest works by Miller and Friesen (1977), Miller (1983), Covin and Slevin (1989), Lumpkin and Dess (1996) and the latter work by Hughes and Morgan (2007); it includes Rauch *et al.*'s (2009) meta-analysis of the EO-performance relationship. Therefore, developing the EO theory has been almost entirely through a quantitative approach since its inception (Wales *et al.,* 2013:361), and adopting the same would afford a logical basis for comparison with this study. By the same token, in measuring EO the use of standardised instruments developed by Miller, Covin and Slevin (1989), and Hughes and Morgan (2007), reinforces this methodological approach. Moreover, most studies on firm growth are survey based (Moreno & Casillas, 2007, 2008; Casillas & Moreno, 2010; Gurbuz & Aykol, 2009; Fairoz & Hirobami, 2016). Survey data are more or less the only alternative if

researchers want to have data on attitudes, perceptions, strategies and resources from a large number of cases (Davidsson & Wiklund, 2006:40).

It is noteworthy that Antonites and Nonyane-Mathebula (2012), Lotz and van der Merwe (2013), le Roux and Bengesi (2014), Neneh and van Zyl (2017) have conducted EO studies in South Africa through the quantitative approach. Since this research intends to advance an existing theory in the South African context it is reasonable to follow a reliable and acceptable methodological approach in investigating this phenomenon. A departure from such may create a new challenge which is beyond the scope of this study.

Furthermore, this study responds to Miller's (2011:887) recommendation which calls for improvement in the quality of quantitative research. It stipulates that researchers should be very clear about the scope of their sample and ensure that its boundaries are well understood. This is important to understand the sources of heterogeneity within the data and to consider how these might influence the conclusions of a study. Hence, this study is restricted to small businesses as defined in South Africa (as discussed in Section 3.6).

Given the empirical nature of this study and necessity of using primary data, a survey is considered suitable (Mouton, 2011:144) which invariably leads to a quantitative methodology. With data collected through a survey and the use of statistical analysis techniques, the research hypotheses can be tested and deductions made. Apparently, the quantitative methodological approach can address the research objectives identified in this study. Moreover, the ready availability of existing measures and accessibility to a sample of small, medium and micro enterprises (SMMEs) makes a survey feasible. Considering the limited time and resources available to complete the study, the choice of a survey is further justified by the relative ease of data collection and analysis.

5.5 MEASUREMENT INSTRUMENT AND PILOT STUDY

As with quantitative studies, this study will require a research instrument for data collection and measurement of the constructs understudy; a pilot test is necessary to determine weakness in the instrument and provide proxy data for probability

sampling (Cooper & Schindler, 2014:85). Pilot testing entails reliability and validity analysis which will be covered in this section.

5.5.1 Measurement Instrument

According to Zikmund *et al.* (2013:289), measurement is a process of describing some property of the phenomenon of interest by assigning numbers in a reliable and valid way. Such scientific enquiry will require a measurement instrument. In this study, questionnaires were used to elicit the information required from respondents in order to measure the constructs involved. This section elaborates on the levels of measurement, origin, constituents and design of the instrument used in this study. Existing instruments that are considered valid and reliable in previous studies (Miller & Friesen, 1982; Slevin & Covin, 1997; Hughes & Morgan, 2007) were used to measure seven of the constructs involved in this study; innovativeness, pro-activeness, risk-taking, competitive aggressiveness and autonomy; environmental hostility (EH) and environmental dynamism (ED). However, employment growth (EG) is measured objectively.

5.5.1.1 Levels of measurement

With regards to levels of measurement, there are four different types of scales widely used for measurement; nominal, ordinal, interval and ratio scales (Cooper & Schindler, 2014; Leedy & Ormrod, 2015:110). Nominal scales are used for variables whose categories cannot be rank ordered. Ordinal scales are ranking scales as they allow items to be arranged based on how much of the concept in question they possess. Interval scales have both nominal and ordinal properties but they capture information about differences in quantities of a concept from one observation to another. Ratio scales represent the highest form of measurement as they have all the properties of interval scales with the additional property of representing absolute quantities characterised by absolute zero. The scale of measurement determines the statistical procedures that can be used to process data. In the questionnaire developed for this study all these scales were incorporated as questions asked were in different forms. Table 5.5 is a summary of measurement scale characteristics, statistical implications and their relationship with the research instrument. It also

indicates how the measurement scales relate to each of the questions contained in the questionnaire used in this study. It shows that the investigative questions which address the constructs being measured are either interval or ratio scales and the demographic questions are structured using nominal and ordinal scales. Accordingly, this instrument will allow for both descriptive and inferential statistic analyses.

5.5.1.2 Measurement of entrepreneurial orientation

Covin and Wales (2012:697) observe that the measures of EO that assess its individual dimensions (Hughes & Morgan, 2007) and that which measures EO as a composite dimension (Miller, 1983; Covin & Slevin, 1989), are not alternative approaches assessing the same phenomenon. Covin and Wales (2012) assert that they are measures of different phenomena and suggest that assessing the separate dimensions of EO through Hughes and Morgan's (2007) approach aligns with the multi-dimensional conceptualisation of EO proposed by Lumpkin and Dess (1996). The multi-dimensional conceptualisation stresses that EO is characterised by five dimensions that can vary independently based on performance metrics and stages of development (Hughes & Morgan, 2007:651). For this study EO is measured with a 7-point, 18-item Likert scale developed by Hughes and Morgan (2007) as it recognises the independence of its dimensions.

Table 5.5: Measurement characteristics, statistical implications and research instrument

Measurement Scale	Characteristics of the Scale	Statistical Possibilities of the Scale	If used in this Study	Questions in the instrument as related to measurement types
Nominal	Measures only in terms of names or designations of discrete units or categories.	Mode, percentage of values or X^2.	Yes	Q5.1, Q5.3, Q5.6, Q5.7
Ordinal	Measures in terms of such values as “more” or less, “larger” or “smaller” but without specifying the size of the intervals.	Median, percentile rank and rank correlation.	Yes	Q5.2, Q5.4, Q5.5, Q5.8, Q5.9, Q5.10
Interval	Measures in terms of equal intervals or degrees of differences but with an arbitrarily zero point that does not represent nothing.	Mean, standard deviation, product moment correlation; allows for most inferential statistical analysis.	Yes	Q1, Q2, and Q3
Ratio	Measures in terms of equal intervals and an absolute zero point.	Geometric mean, proportional comparisons; allows for virtually any inferential statistical analysis.	Yes	Q4

Source: Cooper and Schindler (2014:250).

Table 5.6, Table 5.7, Table 5.8, Table 5.9 and Table 5.10 present the measurement of the five dimensions of EO; risk-taking, innovativeness, pro-activeness, competitive aggressiveness and autonomy, respectively. The tables indicate the questions and item statements associated with each dimension as used in the survey. In response to each of the questions (Q1.1 to Q1.18) a scale of 1 to 7 is presented. Respondents are asked to choose from 1 (strongly disagree) to 7 (strongly agree) the extent to which they agree or disagree with each statement as it best describes their businesses.

Table 5.6: Measurement scale for risk-taking

Latent Factor	Observable Variable	Item Statement
Risk-taking (RT)	Q1.1	The term "risk-taker" is considered a positive attribute for people in our business.
	Q1.2	People in our business are encouraged to take calculated risks with new ideas.
	Q1.3	Our business emphasises both exploration and experimentation for opportunities.
Source: Hughes and Morgan (2007:659).		

Table 5.7: Measurement scale for innovativeness

Latent Factor	Observable Variable	Item Statement
Innovativeness (INNOV)	Q1.4	Our business actively and often introduces improvements and innovations.
	Q1.5	Our business is creative in its methods of operation.
	Q1.6	Our business seeks out new ways to do things.
Source: Hughes and Morgan (2007:659).		

Table 5.8: Measurement scale for pro-activeness

Latent Factor	Observable Variable	Item Statement
Pro-activeness (PA)	Q1.7	We try to take initiative in every situation (for example, against competitors, in projects and when working with others).
	Q1.8	We excel at identifying opportunities.
	Q1.9	We initiate actions to which other organisations respond.
Source: Hughes and Morgan (2007:659).		

Table 5.9: Measurement scale for competitive aggressiveness

Latent Factor	Observable Variable	Item Statement
Competitive Aggressiveness (CA)	Q1.10	Our business is intensely competitive.
	Q1.11	In general, our business takes a bold or aggressive approach when competing.
	Q1.12	Our business tries to undo and out-manoeuvre the competition as best as we can.
Source: Hughes and Morgan (2007:659).		

Table 5.10: Measurement scale for autonomy

Latent Factor	Observable Variable	Item Statement
Autonomy (AN)	Q1.13	Employees are permitted to act and think without interference.
	Q1.14	Employees perform jobs that allow them to make and instigate changes in the way they perform their work tasks.
	Q1.15	Employees are given freedom and independence to decide on their own how to go about doing their work.
	Q1.16	Employees are given freedom to communicate without interference.
	Q1.17	Employees are given authority and responsibility to act alone if they think it to be in the best interest of the business.
	Q1.18	Employees have access to all vital information.
Source: Hughes and Morgan (2007:659)		

5.5.1.3 Measurement of environmental hostility

In measuring environmental hostility (EH) a 6-item, 7-point Likert scale was adopted from Slevin and Covin's (1997) study. This measure is considered to be reliable as it was developed based on Covin and Slevin's (1989) hostility measure with an inter-item reliability co-efficient of 0.73. It has subsequently been used by Covin, Slevin and Heeley (2000) and Urban (2010) with a Cronbach's alpha co-efficient (a measure of internal consistency) of 0.71.

Table 5.11 presents the measurement scale for EH. It indicates the questions and item statements associated with EH as used in this study. The statements assess the industry in which the business operates in terms of competition, business climate and the availability of marketing and investment opportunities. In response to each of the questions (Q2.1 to Q2.6) a scale of one to seven is presented. Respondents are asked to choose from one (strongly disagree) to seven (strongly agree) the

extent to which they agree or disagree with each statement as it best describes the actual condition of the environment in which their businesses operate.

Table 5.11: Measurement scale for environmental hostility

Latent Factor	Observable Variable	Item Statement
Environmental Hostility (EH)	Q2.1	The failure rate of firms in my industry is high.
	Q2.2	My industry is very risky such that one bad decision could easily threaten the validity of my business unit.
	Q2.3	Competitive intensity is high in my industry.
	Q2.4	Customer loyalty is low in my industry.
	Q2.5	Severe price wars are characteristics of my industry.
	Q2.6	Low profit margins are characteristics of my industry.
Source: Slevin and Covin (1997:206).		

5.5.1.4 Measurement of environmental dynamism

Environmental dynamism (ED) is measured using a 5-item, 7-point scale that was adopted from Miller and Friesen's (1982) study. This measure is considered to be valid and reliable as it has been useful in previous studies; Miller (1983), Lumpkin and Dess (2001); Adamako and Danso (2014) with Cronbach's alpha values of 0.74, 0.80 and 0.82, respectively. It has been used to categorise firms by Miles, Covin and Heeley (2000) as well. The measurement scale for ED is presented in Table 5.12. It indicates the item statements associated with ED as used in this study. The statements assess the rate of change of innovation and the uncertainty associated with competitors within the industries which the business operates. In addressing each pair of statements (Q3.1 to Q3.5) a sliding scale of 1 to 7 is presented. Respondents are asked to choose the number that best describes the actual conditions of the environment in which their businesses operate.

Table 5.12: Measurement scale for environmental dynamism

Latent Construct	Observable Variable	Item Statement	
Environmental Dynamism (ED)	Q3.1	Our firm must rarely change its marketing practices to keep up with market and competitors.	Our firm must change its marketing practices extremely frequently.
	Q3.2	The rate at which services become obsolete in the industry is very slow.	The rate at which services become obsolete in the industry is very high.
	Q3.3	Actions of competitors are quite easy to predict.	Actions of competitors are unpredictable.
	Q3.4	Demand and tastes are fairly easy to forecast.	Demands and tastes are almost unpredictable.
	Q3.5	The service technology used in our business is not subject to very much change and is well established.	The modes of services used in our business change often and in a major way.
Source: Miller and Friesen (1982:18)			

5.5.1.5 Measurement of employment growth

In response to the problem statement and consistent with the research objectives, this study draws attention toward employment growth. As shown in the conceptual model (Figure 4.1) it is the variable upon which environmental hostility, dynamism and the dimensions of EO depends on. Since there is no scale known to the researcher in measuring employment growth, this study resorts to change in the number of employees (Nieman & Nieuwenhuizen, 2014:295) which is an objective measure in assessing business growth. Utilising the change in number of employees in firm growth studies follows the precedent of prior studies (Ferreira, Azevedo & Fernandez, 2011; Janssen, 2009, Gurbuz & Aykol, 2009). Essentialy amongst other indicators of business growth this study considers employment growth as a tenable measure of growth as well as overall business performance (See Eresia-Eke & Okerue, 2018). This study investigates employment growth within the busines as it transits through the total-early-stage of entrepreneurial activity. Based on the GEM model discussed in chapter three the number of employees in the business at the point of conception, persistent and currently is of particular intrest in this study. Consequently, the measurement scale for employment growth is presented in Table 5.13 is used. It directly probes the numbers of workers employed by the business when it started, after 3.5 years as a start-up, and currently. These are addressed in Q4.1, Q4.2 and Q4.3.

Table 5.13: Measurement of employment growth

Latent Factor	Observable Variable	Item Statement
Employment Growth (EG)	Q4.1	How many workers were employed by the business when it started?
	Q4.2	How many workers were employed by the business at 3.5 years old?
	Q4.3	How many workers are employed by the business currently?
Source: Author's own compilation		

5.5.1.6 Employment growth indices: relative variation method and Gibrat's Law

In general firm growth is often modelled with two size observations (See Davidsson & Wiklund, 2006:56) which implies that two parameters will suffice for the measurement of growth. Hence the relative variation method is presented in Equation 5.1.

$$g = (S_{t1} - S_{t0})/S_{t0} \qquad \text{(Equation 5.1)}$$

Where:

- g is total growth during the whole period
- S_{t0} is the size at the start of the period, and
- S_{t1} is the size at the end of the period.

The relative variation method has been used by Jansen (2006, 2009) and Gurbuz and Aykol (2009). However, it tends to be biased in favour of firms with an initial small size, and in this method, growth is modelled as a quantum leap from a point of observation to another. As a result of this approach, the initial firm size may appear among the strongest explanatory variables of firm growth. This approach is subject to debate as it raises the question of lack of considearyion for the time period over which growth actually takes place. To cater for the shortfall of this method Davidsson and Wiklund (2006:55) proposes Gibrat's Law of proportionate effect. This law assumes that the growth rate of a firm is constant and is mathematically expressed in Equation 5.2:

$$\textbf{Gibrat's Law: } s_{t1} = s_{to}(1 + g)^{t(1-to)} \qquad \text{(Equation 5.2)}$$

As applied in this study for the measurement of employment growth it is expressed as: $e_c = e_{fb}(1 + g_e)^{(c-fb)}$ (Equation 5.3)

Where:

- c is current year of operation
- fb is firm birth year
- e_c is the current number of employees
- e_{fb} is the number of employees at firm birth
- g_e is the annual growth rate of the number of employees

Based on the model presented in Equation 5.3, it is assumed that an equivalent and relative share of new employees is added each year because it considers an annual growth rate (g_e) as the employment growth indicator. It is considered that this approach is less sensitive to the initial size of the firm which is an advantage method as it reduces the size/growth effect (Davidsson & Wiklund, 2006:55). Since the annual growth rate is the growth index and the parameter of interest in this model, the initial size effect is significantly reduced. The reason being that growth is assumed to be a continuous and constant phenomenon.

5.5.2 Pilot Study

Leedy and Ormrod (2015:114) emphasise that validity and reliability of measurement instruments influence the extent to which a phenomenon can be investigated accurately and the probability that statistical significance will be obtained in data analysis. These will influence the extent to which meaningful conclusions can be drawn from the data. Therefore, the measurement instrument for this study was tested for reliability and validity to ensure its credibility. Using the research instrument data that was initially collected from 78 respondents for pilot testing, it was analysed using the Statistical Package for Social Science (SPSS) version 24.0. This section elaborates on the validity, reliability and practicality of the measurement instruments and discusses the result of the pilot study.

5.5.2.1 Validity

Cooper and Schindler (2014:257) enumerate two broad categories of validity; external and internal validity. While external validity of a research finding is the data's ability to be generalised across persons, settings and times, internal validity is limited to the effectiveness of a research instrument in measuring what it is purported to measure. The validity of a measurement instrument can take different forms. It includes:

- Content validity
- Criterion validity
- Construct validity

Content validity is the extent to which a measurement instrument is a representative sample of the content area being measured. If the data collection instrument adequately covers the topics that have been defined as the relevant dimension, it is indicative of high content validity. Criterion validity is the extent to which the results of an assessment instrument correlate with another presumably related measure. It reflects the success of measures used for prediction or estimation. Construct validity can be considered through both theory and the measurement instrument being used (Cooper & Schindler, 2014:259). It is a measure of the extent to which an instrument captures the construct or concept it intends to measure (Robson, 2002:102). In this study two types of construct validity are explored. Covergent validity and discriminant validity. While convergent validity refers to the degree to which two or more measures of a construct that theoretically should be related are in fact related, discriminant (divergent) validity test whether concepts or measurements that are not supposed to be related are actually unrelated.

A summary of validity estimates is shown in Table 5.14. Since the research instrument in this study consists largely of scales used in previous studies, content and criterion validity is assumed to be acceptable. Table 5.14 indicates factor analysis (FA) as a method of measuring construct validity. Therefore, both exploratory and confirmatory factor analytic procedure are considered in this study. This will be elaborated on further in the data analysis section of this chapter and the results presented in Chapter 6.

5.5.2.2 Reliability analysis

In general reliability is the consistency with which a measurement instrument yields a certain result when the object being measured remains unchanged (Leedy & Ormrod, 2015:116). A reliable instrument will deliver the same result repeatedly should the conditions remain constant. Cooper and Schindler (2014:260), observe that reliability is a necessary contributor to validity but is not a sufficient condition for validity – Moos (2014:200) elaborates on this, stating that if a measure is not reliable then it cannot be valid, but if it is reliable it may or may not be valid. In other words, a measure that is valid is also reliable, but the reverse is not necessarily true. Therefore, in assessing measurement instruments reliability is not as valuable as validity but is much easier to obtain.

Robson (2002:102) draws attention to the unreliability of an instrument as being caused by error or bias. Hence reliability is concerned with estimates of the degree to which an instrument is free of random or unstable error. Saunders *et al*. (2016:192) identify four errors that can pose a threat to the reliability of a measurement instrument. They are: participant error, participant bias, and interviewer error and interviewer bias.

In this study, participant error was avoided because response to the question is at the convenience of the participant. Since duress or any other form of pressure is absent in this scenario participant error is reduced. Any form of bias by participants towards the study in response to the questionnaire was addressed by informing the respondents that this study is exclusively for academic purposes and the information disclosed will remain confidential. Interviewer error was largely avoided because the same structured questionnaire was received by all respondents. There were no multiple interviewers as the questionnaire was self-administered. Error as a result of interviewer bias occurs where results or responses are interpreted differently. Since the questionnaires were mailed to participants, responses were captured directly by the internet software facilitating the study, thus not resulting in interviewer bias.

Reliable instruments can be used with confidence and work well at different times under different conditions. This distinction of time and condition is the basis for frequently used perspectives on reliability. Table 5.15 shows the summary of reliability estimates. Although the table presents three types of reliability estimates and their corresponding co-efficient, this study considers internal consistency as a measure for reliability.

Table 5.14: Summary of validity estimates

Types of Validity	What is measured	Methods of Measurement
Content	Degree to which the content of items adequately represents the universe of all relevant items under the study	• Judgemental • Panel evaluation with content validity ratio
Criterion-Related • **Concurrent** • **Predictive**	Degree to which the predictor is adequate in capturing the relevant aspects of the criterion. It entails the: • description of the present. • prediction of the future.	• Correlation
Construct	Answers the question of what accounts for the variance in measure. It attempts to identify the underlying constructs being measured and determines how well the tests represent them	• Judgemental • Correlation of proposed test with established one • Convergent-discriminant techniques • Factor analysis • Multitrait-multimethod analysis.
Source: Cooper and Schindler (2014:257).		

Internal consistency is the degree to which instrument items are homogeneous and reflect the underlying construct(s) (Cooper & Schindler, 2014:261). In other words, the extent to which all the items within a single instrument yield similar result. One of the most commonly used indicators of internal consistency is Cronbach's alpha co-efficient which is obtained through specialised correlation formulas. Co-efficient alpha measures internal consistency by computing the average of all split-half reliabilities for a multiple-item scale (Zikmund & Babin, 2007: 322). The co-efficient varies between 0 for no reliability, and 1 for maximum reliability (DeVellis, 2003:17; Kent, 2007:142) but values of below 0.7 can realistically be expected with psychological constructs (Field, 2009:668).

Since this study is an assessment of entrepreneurial and environmental perception amongst SMMES in South Africa, a value of 0.6 is acceptable (Pallant, 2011:97). However, it is acknowledged that Cronbach's alpha values are quite sensitive to the number of items in the scale. With short scales (of fewer than ten items), it is common to find Cronbach's alpha values as low as 0.5. In this case, it may be more appropriate to report the mean inter-item correlation for the items of which an optimal range of 0.2 to 0.4 is considered acceptable.

The pilot study required that internal consistency of the measurement to be conducted on items depicting each of the constructs; risk-taking (RT), innovativeness (INNOV), pro-activeness (PA), competitive aggressiveness (CA), autonomy (AN), environmental hostility (EH), environmental dynamism (ED) and employment growth (EG). The results are shown in Table 5.16. RT, INNOV, PA, CA, AN and EH have Cronbach's alpha values above 0.8 which is acceptable. Although the values for ED and EG were below 0.7, their inter-item correlation mean values are 0.209 and 0.442, respectively, which is acceptable with short scales.

Table 5.15: Summary of reliability estimates

Types of Reliability	Co-efficient	What is Measured	Methods of Measurement
Test-Retest	Stability	Reliability of a test or instrument inferred from examined score. Same test is administered twice to same respondents.	• Correlation
Parallel forms	Equivalence	Degree to which alternative forms of the same measure produce the same or similar results	• Correlation
Split-half, K R 20 Cronbach's alpha	Internal Consistency	Degree to which instrument items are homogeneous and reflect the underlying construct(s).	• Specialised correlation formulas
Source: Cooper and Schindler (2014:260)			

Table 5.16: Results of reliability analysis – internal consistency (n = 78)

Construct	Items / Variables	Cronbach's Alpha	Mean Inter-Item Correlation
RT	Q1.1, Q1.2, Q1.3	0.824	0.616
INNOV	Q1.4, Q1.5, Q1.6	0.875	0.699
PA	Q1.7, Q1.8, Q1.9	0.825	0.619
CA	Q1.10, Q1.11, Q1.12	0.824	0.607
AN	Q1.13, Q1.14, Q1.15, Q1.16, Q1.17, Q1.18	0.884	0.567
EH	Q2.1, Q2.2, Q2.3, Q2.4, Q2.5, Q2.6	0.807	0.414
ED	Q3.1, Q3.2, Q3.3, Q3.4, Q3.5	0.573	0.209
EG	Q4.1, Q4.2, Q4.3	0.632	0.442
Source: Author's own compilation.			

5.5.2.3 Practicality

The credibility of a research process requires the measurement process to be reliable and valid whilst operational requirements call for its practicality. Cooper and Schindler (2014) specify practicality as a characteristic of a good measurement. They explain it in terms of cost consideration, convenience with use of the

measurement instrument and the ease of interpretation. It is from this premise that the current study considered the practicality of the measurement instrument to ensure its credibility.

The length of the questionnaire can be associated with the costs incurred in the research. However, there is always a trade-off between validity and cost since more measurement items may give a higher content validity and possibly reliability. In this view, the economic consideration was addressed by limiting the number of items to the original design and not including any extra items. Moreover, the use of self-administered online questionnaires also reduces the cost of data collection for the researcher. The production and distribution of hard copies was avoided. In addition, the questionnaire was limited to five questions and each of them was kept short without jeopardising the validity of the measurement instrument.

An instrument passes the convenience test if it is easy to administer (Cooper & Schindler 2014:262). With this understanding, the questionnaire was simple in its design, most of the questions made use of a 7-point Likert scale or a nominal scale which made it easy for respondents to complete. Unfamiliar research concepts used in the questionnaires were clarified through simple instructions. use Simple language was used in each of the items and technical jargon was avoided. In addition, target questions that interrogate the constructs in the study were asked before questions addressing the demographic details. Since the former is more thought provoking and less onerous, this reduces the effect of questionnaire fatigue.

Interpretability in practicality is applicable if a person other than the designer of the measurement instrument must interpret the result (Cooper & Schindler, 2014:262). In this study, the designer of the measurement instrument (researcher) is directly responsible for the interpretation of the results and not the respondents. An example of the measurement instrument is provided in Appendix B.

5.6 SAMPLING DESIGN

Researchers rarely have access to the entire population; therefore, data are collected from a subset of the population known as the “sample” (Field, 2009:34). It is from the sample that inferences are drawn about the population. Cooper and

Schindler (2014:339) present compelling reasons for sampling which includes the benefit of lower costs, greater accuracy of results and quicker data collection. This section considers the sampling procedures in this study as concerning external validity, method of sampling and sample size.

5.6.1 Sample Validity

Leedy and Ormrod (2015:176) note that the results obtained from a sample can be used to make generalisations about the population only if the sample is truly representative of the population. In measurement terms, this leads to the consideration of external validity. The validity of a sample, therefore, depends on its accuracy and precision (Cooper & Schindler, 2014:339).

When the sample is drawn, measurement variables of some sample elements will be less than the measure of those same variables drawn from the population, resulting in under-estimation. Over-estimation occurs when measurement variables of some other elements are more than the population values. This creates a possibility for bias in sampling. Accuracy is the degree to which bias is absent from the sample. An accurate and unbiased sample is one in which the under-estimated elements offset the over-estimated ones. For this to occur there must be enough elements in the sample and a large sample could cater for that as is the case in the present study.

A second criterion of validity is precision of estimate. This is obtained by measuring how closely the sample represents the population. Precision is measured by the standard error of estimate, a type of standard deviation measurement. The smaller the standard error of estimate, the greater the precision of the sample.

5.6.2 Sampling Method

Sampling types are often classified into two on representation basis; non-probability sampling and probability. In non-probability sampling, each member does not have a known chance of being included. In this approach the researcher has no way of predicting or guaranteeing that each element of the population will be represented in the sample. Examples of non-probability sampling are convenience, purposive (judgement or quota) and snow-ball sampling. Probability sampling is based on the

concept of random selection; it is a controlled procedure that ensures that each population element is given a known non-zero chance of selection. This procedure is never haphazard and only probability samples provide estimates of precision (Cooper & Schindler, 2014:343). Examples of probability samples are random, systematic, cluster and stratified sampling. Since a valid sampling frame was available in this study a probability sampling approach is feasible, hence random sampling is explored. This follows the precedence of Morallane (2016), who conducted a study of established entrepreneurs in South Africa as well as Mandengenda (2016) who investigated entrepreneurship traning needs for small business development in Zimbabwe.

5.6.3 Sample Size

McQuitty (2004:175) suggests that it is important to determine the minimum sample size required in order to achieve the desired level of statistical alternatives within a given measurement model before data are collected. According to Schreiber, Nora, Barloworld and King (2006:17) although sample size is informed by the normality of the data and the mode of estimation used by researchers, it is generally acceptable to obtain ten respondents for every ten items (observable variables) as indicated in the measuring instrument. Gay, Mills and Airasian (2012:139) offer guidelines for selecting sample sizes and they assert that beyond a certain point (where N > 5000) the population size is almost irrelevant and a sample size of 400 will be adequate. Based on these criteria, a sample size of 300 to 400 would be appropriate for this study. This criterion was met as it obtained a sample size of 1,501 after data collection. In general, a larger sample size is more precise and accurate than a smaller one (Cooper & Schindler, 2014:349).

5.7 DATA COLLECTION

The questionnaire developed and discussed in Section 5.7.1 is the instrument for data collection in this study. However, it needed to be distributed to potential respondents in the identified sample frames to obtain the information required. With continuing technological advances and increasing computer literacy, many survey researchers are adopting information and communication technology for data collection and analysis. This can be done through the use of websites to recruit

participants and obtain their responses to survey questions. Leedy and Ormrod (2015:171) suggest that when prospective participants are at diverse locations, the use of e-mail to request participation and obtain response is tenable. Since this study covers small businesses across South Africa, an online survey of selected databases of small business was conducted. In comparison with paper-based questionnaires, it facilities greater participation and quicker collection of data. It is also cost-effective as distribution costs were minimal.

Since a large sample size is anticipated in this study to be drawn from each of the nine provinces of South Africa and reach small businesses in as many industries as possible, collection of data was conducted online – through "*Survey Monkey*" from 01 June until 31 July 2017. *Survey Monkey* is a commercial website for data collection. It provides templates that make questionnaire design easy and enable a variety of item – types (for example, multiple items, rating scales) to be presented in the study. It also includes features for communicating with a pre-selected sample of participants through e-mail invitation as well as features through which the responses can be downloaded. These features were explored for data collection in this study. The mailing list was sourced from:

- South African national business directories.
- Business incubators, eco-systems and business financing houses. These organisations were contacted and requested to distribute the surveys to their members.
- Government entrepreneurs support agencies such as SEDA, SEFA, NYDA.

Over the two-month period, 2,230 questionnaires were emailed to small businesses on selected databases across South Africa. A response rate of 67.3 % was achieved as 1,501 small businesses owners and managers responded to the survey. Some of the respondents called or emailed the study team for further clarity on the purpose of the study and its intended use before completing the survey. The collected data were checked for missing values; *Survey Monkey* retained only surveys that were completed. Since employment growth remains the focus in this study, a selective process followed on the basis of whether the businesses showed positive growth or not. A preliminary analysis of the data indicated that 181 respondents showed negative growth, 285 showed no growth and four had operated businesses for less

than a year (a time period considered impractical to assess annual growth). Since employment growth is restricted to increase in the number of employees as defined in this study, these responses were excluded from the study, leaving 1,031 responses for analysis.

5.8 DATA ANALYSIS TECHNIQUES

Analysis involves breaking up accumulated information into manageable themes, patterns, trends and relationships (Mouton, 2011:108). Its purpose is to understand the various constitutive elements of a data set through inspection of relationships between concepts, constructs or variables and to see whether patterns or trends can be identified, isolated or established. Cooper and Schindler (2014:86) describe data analysis as a process that involves reducing data to manageable sizes, developing summaries, investigating patterns and the use of statistical techniques. Subjecting data to statistical procedures and reliance on deductive reasoning is a common feature in quantitative studies in an effort to maintain objectivity whilst assessing the research process and drawing meaningful outcomes from it (Leedy & Ormrod, 2015: 99).

In this study, data analysis commenced at the pilot phase whilst considering the reliability of the instrument through the measure of internal consistency which has been discussed in Section 5.5.2.2. The present section takes it further as it elaborates on the analysis approaches considered and gives details of the statistical procedures that are required to test the hypothesised relationships. Table 5.17 categorises the data analysis processes in this study into three phases. **Phase I** consists of the pilot study with the tests for reliability and validity of the measure, **Phase II** consists of descriptive statistics and **Phase III** consists of inferential statistical analysis. As shown in the table, statistical techniques used in this study include factor analysis, descriptive statistics, correlation analysis, regression analysis and structural equation modelling (SEM).

Data analysis was conducted in this study using the Statistical Package for Social Sciences (SPSS) Version 24.0. This is a software application package developed by International Business Machines. However, the Confirmatory Factor Analysis (CFA) was conducted using The Analysis of Moment Structures (AMOS)

Version 24.0. In developing a model, Partial Least Square-Structural Equation Modelling (PLS-SEM) analysis was done using Smart PLS.

Table 5.17: A summary of the phases of data analysis

Phase I Reliability and Validity Analysis	Phase II Descriptive Analysis	Phase III Inferential Analysis
• Internal Consistency • Exploratory Factor Analysis (EFA) • Confirmatory Factor Analysis (CFA)	• Item descriptive – frequency tables, mean, standard deviation, skewness and kurtosis • Correlation Analysis	• Goodness-of-fit Test (X^2) • Regression Analysis • Partial Least Square-Structural Equation Modelling (PLS-SEM)
Source: Author's own compilation.		

5.8.1 Factor Analysis

In multi-variate analysis if variables are inter-related without designating some as dependent and others independent then interdependence of the variables is assumed; factor analysis (FA) is an interdependency technique (Cooper & Schindler, 2014). It is a general term for computational techniques with the objective of reducing, to a manageable number, variables that belong together and have overlapping measurement characteristics. It is used to examine the correlations among a number of variables and identify clusters of highly inter-related variables that reflect underlying themes, or factors within the data (Leedy & Ormrod, 2015:259).

5.8.1.1 Exploratory factor analysis

Exploratory factor analysis (EFA) is used often in the early stages of research to gather information about the interrelationships among a set of variables (Pallant, 2011:181). Using this approach, the factors are not derived from theory but the underlying structure of the data being studied. Pallant (2011:182), outlines three main steps in conducting factor analysis. They are

- Assessment of suitability of data
- Factor extraction, and
- Factor rotation and interpretation.

In assessing the suitability of the data for FA, sample size and the strength of the relationship among the variables are to be considered. Although there is little agreement amongst researchers on a definite sample size, a fairly large sample is generally recommended (Pallant, 2011:18). Tabachnick and Fidell (2007:613) suggest that a minimum of 300 respondents would be suitable for FA. Since this study has 1,031 respondents available for analysis it can proceed with FA on this basis. With regard to the inter-correlation among the items, Pearson Product Moment (PPM) correlation of the items underlying the constructs must indicate co-efficient values that are 0.3 or above. According to Hair *et al.* (2010:103) this confirms suitability for FA as well. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity can be used to check the factorability of a correlation matrix. Bartlett's test of sphericity should be significant ($p < 0.05$) for the factor analysis to be considered appropriate. The KMO index ranges from 0 to 1, a value of 0.6 is suggested as the minimum for a good factor analysis.

Factor extraction involves determining the smallest number of factors that can be used to best represent the interrelationships among the set of variables. There are a variety of approaches that can be used to extract the number of underlying factors or dimensions. Pallant (2011:183) specifies some of the most commonly available extraction techniques such as: principal component analysis; principal factors; image factoring; maximum likelihood factoring; alpha factoring; unweighted least squares; and generalised least squares. There are a number of techniques that can be used to assist in the decision concerning the number of factors to retain: Kaiser's criterion; scree test; and parallel analysis.

The final step involves factor rotation and interpretation. Once the number of factors has been determined, the next step is to try to interpret them. To assist in this process, the factors are rotated. This does not change the underlying solution; it rather presents the pattern of loadings in a manner that is easier to interpret. There are two main approaches to rotation, resulting in either orthogonal or oblique factor

solutions. According to Tabachnick and Fidell (2007:638), orthogonal rotation results in solutions that are easier to interpret and to report; however, they do require the researcher to assume that the underlying constructs are independent and uncorrelated. Oblique approaches allow for the factors to be correlated, but they could be more difficult to interpret, describe and report. They emphasise that, in practice, the two approaches (orthogonal and oblique) often result in very similar solutions, particularly when the pattern of correlations among the items is clear.

5.8.1.2 Confirmatory factor analysis

Confirmatory factor analysis (CFA) is a form of factor analysis which is commonly used in management research. It is used to test whether measures of a construct are consistent with the nature of the construct (or factors) as presented by a data set. As such, the objective of CFA is to test whether the data fit a hypothesised measurement model (Levine, 2005:335), therefore, it provides an indication of construct validity. The variables examined in this study through its measurement items are theory driven, based on findings from previous studies. Therefore, to address the research objectives of this study empirically and attend to its hypotheses, it is necessary to use a confirmatory technique that would enable construct validation on the basis of *a priori* stated theoretical relationships between the observed measures and the underlying latent variable (Byrne, 2004:17). CFA can be considered as an appropriate statistical technique for this study as an understanding of the underlying measurement structure has been gained based on theory and previous empirical studies. Additionally, CFA examines the nature of relationships between constructs based on correlations (Hair, Black, Babin & Anderson, 2010:82). CFA is more appropriate than EFA in the later stages of construct validation and test construction when prior evidence and theory support "more risky" *a priori* predictions regarding latent structure (Brown, 2006:49).

Other than construct validation, CFA can be used for psychometric evaluation of assessment, testing methods effects and testing instrument invariance (Brown & Trevino, 2006:71). It can also be used to confirm test of a measurement theory; which can be taken further with a structural theory to fully specify an SEM model (Hair *et al.,* 2010:693).

5.8.2 Descriptive Statistics

Descriptive statistics are techniques used to describe the characteristics of a population or sample. They summarise the general nature of a set of numeric data by considering how certain measured characteristics appear to be on the average, how much variability exists in the data set and how closely two or more characteristics are associated with one another (Leedy & Ormrod, 2015:29). Cooper and Schindler (2014:400) indicate that descriptive statistical measures are used to depict the centre, spread and shape of distribution and are helpful as preliminary tools for data description. This study will consider the statistical measures which capture central tendencies (mean, median, mode); variability (variance, standard deviation, range, inter-quartile range and quartile deviation) and shape (skewness and kurtosis) in reporting its findings in the next chapter. Leedy and Ormrod (2015:249) considers correlation analysis as a descriptive statistical technique that measures association. This is a procedure by which it can be determined whether two variables are associated with one another; the resultant statistic is called a "correlation co-efficient". Examples of correlation statistics are Pearson product moment correlation, co-efficient of determination, partial correlation and Spearman rank order correlation. Data can be described further with the use of histograms, bar charts, line graphs or scatter plots.

5.8.3 Inferential Statistics

Inferential statistics allow for statistical inferences to be drawn about large populations from relatively smaller samples. According to Quinlan (2011:399), the purpose of inferential statistics is to reach a conclusion that extends beyond the data. Inferential statistical techniques are useful for drawing inferences about the population based on the sample that is drawn from the same population. Leedy and Ormrod (2015:252) specifies their two main functions as

- Estimating a population parameter from a random sample, and
- Testing statistically based hypotheses.

Statistical estimates of population parameters are based on the assumption that the sample is chosen randomly and is representative of the total population. The extent to which a sample is non-random and non-representative of the population is the

degree to which the selection is biased in some way. Hence, the statistic in question is not an accurate reflection of the population. The second major function of inferential statistics is to test hypothesis, therefore, this study is focused on testing statistical hypotheses; which leads to the consideration of level of significance. This is the probability that a statistically significant result might be due to chance alone; when determined in advance as the criterion for rejecting a null hypothesis, it is known as the *p*-value. A *p*-value of 0.05 or 0.01 is used widely.

In presenting the result of a statistical test it is conventional to report the extent to which the test statistic differs from the null hypotheses. This approach reveals the percentage of sampling distribution that lies beyond the sample statistic. The result of a statistical test can also be reported as probability values (*p*-values). The *p*-value is compared with the predetermined significance level and, on that basis, the null hypotheses is either rejected or not rejected. If the *p*-value is less than the significant level (either 0.1, 0.05 or 0.01), then the null hypotheses is rejected. If the *p*-value is greater than or equal to the significance level, the null hypotheses is not rejected.

There are two general classes of significance tests: parametric and non-parametric tests. Parametric tests are more powerful because they are derived from interval and ratio measurements, whilst non-parametric tests are used to test hypotheses with nominal and ordinal measurements (Cooper & Schindler, 2014:440; Leedy & Ormrod, 2015; 259).

For this study the following inferential statistical tests will be employed: goodness-of-fit tests (X^2), regression, factor analysis (EFA & CFA) and Partial Least Square-Structural Equation Modelling (PLS-SEM).

5.8.3.1 Goodness-of-fit test

Measurement model validity depends on establishing acceptable levels of goodness-of-fit (GoF) for the measurement models. Goodness-of-fit indicates how well the specified model reproduces the observed co-variance matrix among the indicator items; the similarity of observed and estimated co-variance matrices (Hair *et al.,* 2010:664).

According to Brown (2006:82), fit indices can be characterised broadly as falling into three categories: absolute fit, fit adjusting for model parsimony, and comparative or incremental fit. Table 5.18 shows the GoF indices as classified by Hair *et al.* (2010) with descriptions and examples.

Brown (2006:82) notes that this typology is not perfect, as some fit indices, such as the Tucker-Lewis Index, have features of more than one category. Most latent variable software packages such as AMOS provides each of the fit indices described below. Because each type of index provides different information about model fit, researchers are advised to consider and report at least one index from each category when evaluating the fit of their models. The guidelines for establishing an acceptable and unacceptable model fit are outlined in Chapter 6 in discussing the findings of this study.

5.8.3.2 Multiple regression

Multiple regression is the most common form of linear regression analysis. As a predictive analysis, the multiple regression is used to explain the relationship between one continuous dependent variable and two or more independent variables (Lee, 2015:170; Leedy & Ormrod, 2015:259). The independent variables can be continuous or categorical. In multiple regression analysis it is assumed that:

- The regression residuals are normally distributed.
- Linear relationships exist between the dependent variable and the independent variables.
- The residuals are homoscedastic and approximately rectangular-shaped.
- Multi-collinearity is absent in the model, meaning that the independent variables are not too highly correlated.

Table 5.18: Goodness-of-fit indices, description and examples

Goodness-of-Fit Indices	Description	Examples
Absolute Fit Indices	They are direct measure of how well the model specified by the researcher reproduces the observed data	Chi-square (X^2) statistic Goodness-of-Fit Index (GFI) Root Mean Square Error of Approximation (RMSEA) Root Mean Square Residual (RMSR) Standardised Root Mean Square Residual (SRMSR) and Normed $X^{2.}$
Incremental Fit Indices	They assess how well the estimated model fits relative to some alternative baseline model	Normed Fit Index (NFI) Tucker-Lewis Index (TLI) Comparative Fit Index (CFI) and Relative Noncentrality Index (RNI)
Parsimony Fit Indices	They provide information on which model among a set of competing models is best considering its fit relative to its complexity	Adjusted Goodness-of-Fit Index (AGFI) and Parsimony Normed Fit Index (PNFI)
Source: Hair *et al.* (2010:666-669).		

Multiple regression models enable the researcher to:

- identify the strength of the effect the each of the independent variables has on the dependent variable
- forecast effects or impacts of changes
- predict trends or future values.

However, it is noteworthy that an independent variable's accuracy in predicting a correlated dependent variable does not necessarily indicate a cause-and-effect relationship (Leedy & Ormrod, 2015:259).

5.8.3.3 Structural equation modelling

Structural equation modelling (SEM) implies a structure for the co-variances between observed variables; it could also be referred to as co-variance structure modelling. Hu and Bentler (1999:1) state that the input to the analysis is usually a co-variance matrix of measured variables such as survey item scores, though sometimes matrices of correlations or matrices of co-variances and means are used. In practice, the data analyst usually supplies SEM programs with raw data, and the programs convert these data into co-variances and means for its own use.

Compared with other multi-variate techniques SEM is a more powerful alternative as multiple and inter-related dependence relationships can be estimated simultaneously and it can represent unobserved concepts or latent variables (Hair *et al.,* 2010:634). In addition to this, SEM can account for measurement error in the estimation process. Hox and Bechger (2010:354) observe that SEM provides a convenient framework for statistical analysis that includes other multi-variate procedures such as factor analysis, regression analysis, discriminant analysis and canonical correlation. SEM provides a unifying framework under which numerous linear models may be fit using flexible, powerful software. SEM is specified through path diagrams which are graphical illustration of the measurement and structural models. These two models are the basic components that characterise the technique (Blunch, 2013:10; Hair *et al.,* 2010:657).

The measurement model is a confirmatory factor analytic process that specifies or describes the links between the latent or unobserved variables and their respective

manifest or observed indicators. It enables assessment for construct validity. The structural model represents the structural theory or conceptual aspects of the relationships between stated constructs. It is the path model that relates exogenous (or independent) variables to endogenous (dependent or mediating) variables and is backed by theory, or the researcher's prior experience or other guidelines. In summary the structural models represent the inter-relationship between constructs in the model.

Whilst the details of SEM could be quite complex, Hair, Hult, Ringle and Sarstedt (2017:30) outline a systematic eight-step procedure for applying Partial Least Square-Structural Equation Modelling (PLS-SEM).

1. Specifying the Structural Model
2. Specifying the Measurement Models
3. Data Collection and Examination
4. PLS Path Model Estimation
5. Assessing PLS-SEM Results of the Reflective and Formative Measurement Models
6. Assessing PLS-SEM Results of the Structural Model
7. Advanced PLS-SEM Analyses, and
8. Interpretation of Results and Drawing Conclusions.

5.9 RESEARCH ETHICS

The importance of observing the necessary ethical principles in relation to human subjects has been emphasised (Powell & Connaway, 2004:17; Saunders *et al.,* 2012). This study is guided by the provisions of the University of Pretoria's research ethics policy. The policy stipulates that research staff, students and research collaborators with the university should meet the legal requirement and comply with the research ethical regulations applicable within the university, faculty and discipline. Based on this policy ethical issues that were observed in this study are detailed below:

Informed Consent: Participants were informed that they were under no obligation to complete the questionnaire and that participation was voluntary. Appendix B

contains the informed consent letter used in this study and an example of the research measurement instrument.

Confidentiality and Anonymity: Participants were also made aware that all information disclosed would be kept confidential.

Negotiating Access: This entailed observing any required organisational procedures or protocol in gaining access to information from businesses. To this end, information about the title, purpose and benefit of the study was provided.

Incentives: Neither financial nor non-financial incentives were offered to respondents.

Research findings: The respondents were also made aware of unlimited accessibility to the findings of the study on completion.

Application for ethical clearance was done through the faculty research ethics committee prior to data collection. The research project was approved to continue. Appendix A contains the approval letter. For approval to be granted the following documents were submitted to the committee:

- Approved Title Registration
- Research Proposal
- Data Collection Instrument
- Letter of Informed Consent
- Letter of Introduction
- Letter of Permission.

5.10 CHAPTER SUMMARY

Chapter 5 has presented an explanation of the research design and methodological approaches employed in this study. It reiterates the intention of the study by outlining its objectives and linking them to the hypotheses. It presents the ontological and epistemological positions of the study being objectivistic and positivistic, respectively, and elaborates on the research design through specific descriptors. Hence the study is considered as a formal, communication, ex post facto, causal predictive, cross-sectional and statistical in nature. This chapter goes further to

contrast the quantitative and qualitative methodological approaches and makes a justification for use of the quantitative approach and survey method in this study.

This chapter provides details of the procedures carried out in the study as relating to the development of the measurement instrument, pilot study, sampling method, data collection and data analysis techniques. The instrument to be used for data collection was pre-tested through a pilot study and reliability analysis conducted. It was found to be acceptable in terms of reliability and subsequently data collection followed through an on-line survey. Based on a criterion of responding firms showing positive employment growth, only 1,031 respondents are considered suitable for analysis.

Descriptive and inferential statistical techniques considered for data analysis have been described in this chapter. Whilst descriptive techniques present a summary of data, inferential techniques are useful for testing hypothesised relationships. Descriptive techniques include measures of central tendency (mean, median and mode), variability (variance and standard deviation) and shape (skewness and kurtosis) as well correlation amongst the variables. Inferential techniques include factor analysis, goodness-of-fit tests, multiple regression analysis and Partial Least Square-Structural Equation Modelling (PLS-SEM). A detailed presentation of the research findings is presented in Chapter 6.

CHAPTER 6
PRESENTATION OF RESEARCH FINDINGS

6.1 INTRODUCTION

The primary objective of this research is to examine the relationships between the business environment (environmental hostility and environmental dynamism), the dimensions of entrepreneurial orientation (EO) and employment growth amongst small businesses in South Africa. Since this is an empirical study that considers the link between the environment, dimensions of entrepreneurial orientation (EO), and employment growth (EG) of SMMEs, this chapter presents the findings of the study in reaching its objective. It also seeks to test the study's hypotheses enumerated in Chapter 4. Thus, the purpose of this chapter is to present, analyse and interpret the data collected. This being a quantitative study, the findings are based exclusively on statistical analysis of data elicited from participants who responded to the survey.

The analysis of the study data is presented in three phases. Firstly, the descriptive statistics of the study are provided; they entail demographic details of the respondents as required by the research instrument and the statistics of the measurement items which capture the observable variables. In addition to this, correlation analysis that describes the association between the constructs is presented. Secondly, tests such as factor analysis (exploratory factor analysis and confirmatory factor analysis) and internal consistency of measurement items are conducted to assess the validity and reliability of the measurement instrument. Results of associated tests such as the Kaiser-Meyer-Olkin (KMO) test, Bartlett's test, factor loadings and procedures such as factor extraction and factor rotation are also described in detail. Thirdly, the relationships between the latent variables is probed through the use of inferential statistical techniques such as regression analysis and partial-least-square structural equation modelling (PLS-SEM).

6.2 DESCRIPTIVE STATISTICAL ANALYSIS

The variables of interest to this study consist of both the personal information of the respondents and that of the businesses which they own or manage. The profile of

the sample is described according to the following variables; gender, age, racial affiliation, highest educational qualification, economic sector, phase of business operation, geo-political location (based on provinces across South Africa), total annual turnover and total gross assets. In this section, data on the respondents' profiles are presented using tables, pie charts and bar graphs.

6.2.1 Gender

As illustrated in Figure 6.1, 67 % of the study's sample are male and 33 % are female. These figures translate to 687 male and 344 female respondents. Thus, with a female to male ratio of 1:2 the sample predominantly consists of male respondents. This is a little different from the national total entrepreneurial activity (TEA) ratio of 3:4 as presented by Herrington, Kew and Mwanga (2017:82). Evidently fewer women responded to this study contrary to expectation. This may be due personal or social factors, for example, awareness of the survey and peculiarity of the sampling frame.

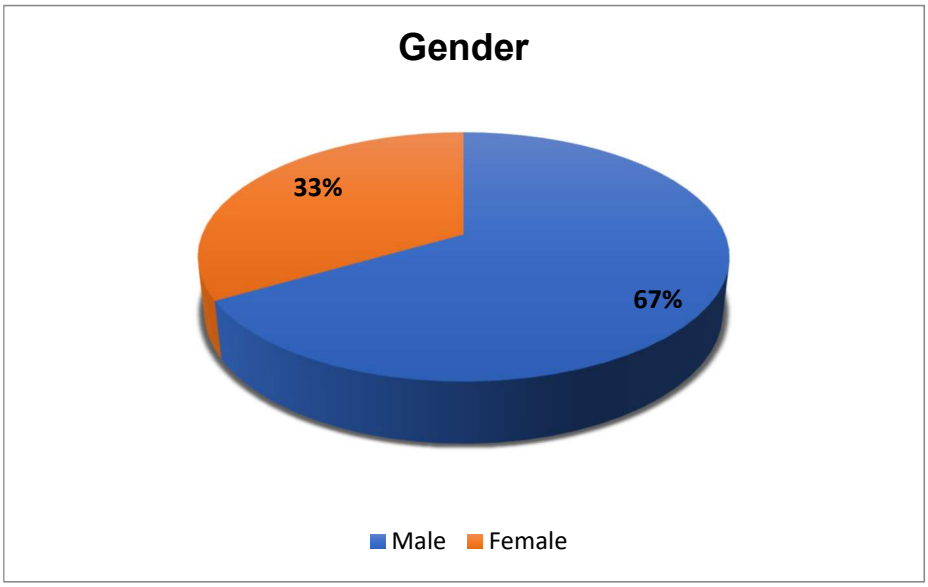

Figure 6.1: Sample distribution by gender (n = 1,031)

6.2.2 Age

Although this is a firm-level study, the ages of respondents are considered. This follows the precedent of Herrington *et al.* (2017:29) as adopted in the Global

Entrepreneurship Monitor (GEM) survey. Using the age ranges in Table 6.1 this classification is reflective of whether the respondents are mostly youths or adults. In South Africa, “young people” are considered as being less than 35 years of age whilst “adults” are age 35 years or more (Statistics South Africa, 2017).

Table 6.1: Age distribution

Age	Frequency	Percentage (%)
18 to 34 years (Youth)	84	8.15
35 to 44 years (Adult)	223	21.63
45 to 54 years (Adult)	314	30.45
55 to 64 years (Adult)	292	28.32
65+ years (Adult)	118	11.45
Total	**1,031**	**100**

The sample consists largely of adult entrepreneurs between 45 and 64 years of age with only 8 % of entrepreneurs being younger than 35 years of age. This is reflective of the shortage of youth entrepreneurs in South Africa which possibly contributes to youth unemployment. According to Statistics South Africa (StatsSA, 2017:25) the unemployment rates for young people aged between 15 and 24 years and 25 and 34 years are 54.3 % and 32.5 %, respectively.

6.2.3 Racial Affiliation

In this study, racial affiliation of the respondents is restricted to Black, Coloured, White, Indian and Others. This is consistent with the classification of races in South Africa presented by Statistics South Africa (StatsSA, 2017:10). As shown in Table 6.2, the sample consists of 208 Blacks (20.2 %), 42 Coloureds (4.1 %), 721 Whites (69.9 %), 37 Indians (3.6 %) and 23 (2.2 %) of Other racial affiliation. The sample is predominantly White followed by Blacks, Indians, Coloureds and Other racial affiliations in descending order. Based on the most recent census, Statistics South Africa (StatsSA, 2012:21) states that almost eight out of ten people

in South Africa are Black Africans (79.2 %), followed by Coloureds (8.9 %), Whites (8.9 %) and then Indians (2.5 %) who are largely in the minority.

Table 6.2: Racial affiliation distribution

Racial Affiliation	Frequency	Percentage (%)
Black	208	20.2
Coloured	42	4.1
White	721	69.9
Indian	37	3.6
Other	23	2.2
Total	**1,031**	**100**

The sample in this study shows that entrepreneurship and small business ownership is still dominated by South Africans of White racial affiliation. This is consistent with Herrington *et al.* (2017:33) who observed that White early-stage entrepreneurship has doubled since 2014 and this racial group is 7.7 times more likely to be opportunity-driven into entrepreneurship than necessity-driven. It would seem that White South Africans are more skilled, educated and aware of entrepreneurial opportunities as compared with Blacks and other racial affiliations (Lloyd, 2018:275), therefore, entrepreneurial activity is higher amongst them as compared with other racial groups.

6.2.4 Economic Sector

Table 6.3 classifies the sample according to the economic sector in which they operate. It begins with an array of service sector-based businesses, followed by non-service sector-oriented businesses. In this sample, service sector-based businesses constitute 42.6 % with 592 responding firms across 16 sub-sectors and non-service-based businesses form 57.4 % with 439 responding firms across 4 sub-sectors. It appears that the total number of businesses in the service sector is comparable with non-service-sector businesses. Furthermore, it can be observed

that professional and consulting services make up 16.8 % and 16.2 %, respectively, of the study sample, which could be as a result of the relative ease of entry with such businesses due to the comparatively low set-up cost associated with them. This can be considered an alternative recourse in the light of the endemic challenge of accessibility to finance that small businesses face. Hence, there are more of them. Furthermore, they may have responded to the study better, given the possibility that they are more likely to appreciate the constructs being assessed in this study.

Table 6.3: Economic sector distribution

Economic Sector	Frequency	Percentage (%)
Banking	1	0.1
Insurance	13	1.3
Investment Services	15	1.5
Real Estate Activities	27	2.6
Entertainment	16	1.6
Telecommunication	5	0.5
Hospitality/Tourism	45	4.4
Mass Media	7	0.7
Health Care	33	3.2
Public Health	3	0.3
Information Technology	48	4.7
Waste Disposal	5	0.5
Professional Services	173	16.8
Consulting Services	167	16.2
Education	26	2.5
Franchising	8	0.8
Agriculture and Food Processing	186	18.0
Mining and Quarrying	21	0.2
Manufacturing (Light Industry)	144	13.9
Construction	88	8.5
Total	**1,031**	**100**

6.2.5 Highest Educational Qualification

The highest educational qualification attained by the respondents to this study is presented in Table 6.4. There were 133 respondents (12.9 %) who reported high school matriculation (matric) as their highest educational qualification, 407 (39.5 %) who responded as having some form of post-matriculation qualification, 232 (22.5 %) had either a Bachelor's Degree or Honours, while 231 (22.4 %) had Master's or Doctoral qualifications and 28 (2.7 %) respondents had other qualifications. It is noteworthy that this sample consists of a considerable number of respondents with tertiary qualifications which explains why the professional and consulting services are predominant in this study.

Table 6.4: Highest educational qualification distribution

Highest Educational Qualification	Frequency	Percentage (%)
High School Matriculation	133	12.9
Post-matriculation, for example, a Diploma	407	39.5
Bachelor's Degree/Honours	232	22.5
Master's & Doctoral	231	22.4
Other Qualifications	28	2.7
Total	**1,031**	**100**

Remarkably, only 13 % of the sample had high school matriculation as their highest qualification, while 3 % had other qualifications. Global Entrepreneurship Monitor research has shown that there is a correlation between perceived capabilities (skills) and total entrepreneurial activity which reinforces the fact that formal education is important in developing entrepreneurial capabilities (Herrington *et al.,* 2017:33).

6.2.6 Phase of Business Operation

Singer *et al.* (2015:23) present the entrepreneurship process and GEM operational definitions, indicating 3.5 years of operations as the threshold for transiting from a

“start-up” to an “established” business. Based on the GEM model, businesses more than 3.5 years old are deemed to have persisted and passed through the early stage of entrepreneurial activity. In this study the phase of business operation is classified accordingly. Table 6.5 shows that 48 businesses (4.7 %) have been in operation for less than 3.5 years and 983 businesses (95.3 %) have been in operation for 3.5 years or more. As this sample consists largely of established businesses with more than 3.5 years of business operation, it does not illustrate the fairly high business discontinuance rate reported by Herrington, Kew & Kew (2015:28) as well as Dzomonda and Fatoki, (2018:5). Presumably this is because the study was selective as it focused on growth-oriented businesses which have somehow persisted through the survival phase and remained in operation.

Table 6.5: Phase of business operation distribution

Years of Operation	Frequency	Percentage (%)
< 3.5 years (Start-up Businesses)	48	4.7
≥ 3.5 years (Established Businesses)	983	95.3
Total	**1,031**	**100**

6.2.7 Geo-Political Location (by Province)

This study received responses from all nine provinces of South Africa. As shown in Figure 6.2, the sample consisted mainly of respondents from Gauteng (474 respondents, representing 46.0 % of the sample), North West (223 respondents, representing 21.6 % of the sample) and Northern Cape (135 respondents, representing 13.1 % of the sample). There were 56 respondents from Mpumalanga (5.4 %), 49 respondents from Limpopo (4.8 %), 35 respondents from the Eastern Cape (3.4 %), 26 respondents from the Western Cape (2.5 %), 21 respondents from the Free State (2.0 %) and 12 respondents from KwaZulu-Natal (1.2 %).

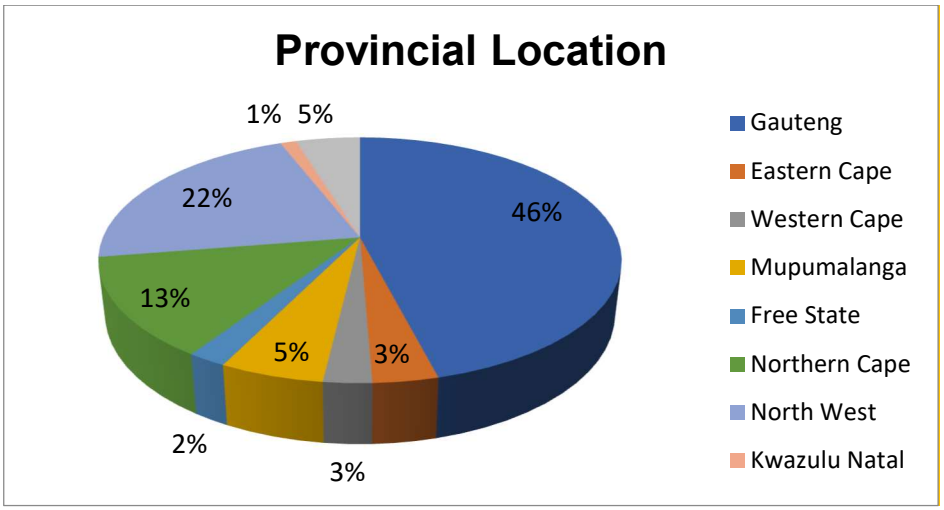

Figure 6.2: Sample distribution by geo-political location (n = 1,031)

Most of the respondents to this study were located in Gauteng Province. This is not at all surprising as it is the most populated province, the economic hub of South Africa and, according to Statistics South Africa (2017:2), has consistently maintained a substantial portion of the country's cohort of entrepreneurs and small business owners.

6.2.8 Total Annual Turnover

The National Small Business Amendment (NSBA) Act of 2003 presents the official definition of a small business in South Africa. The quantitative component of the definition is based on the total annual turnover of the business amongst other criteria; and offers a guideline for classifying small businesses. The guideline stipulates that micro, very small, small and medium enterprises must have an annual turnover between ZAR 0.1 million and ZAR 51 million, depending on the economic sector. The same guideline is followed in categorising the sample in this study. As illustrated in Figure 6.3, it was found that businesses with an annual turnover below ZAR 3 million constitute 46.4 % of the sample and those with a turnover of between ZAR 3 million and ZAR 6 million make up 15.4 % of the sample. The five categories of businesses with total annual turnover between ZAR 6 million and ZAR 26 million represent 9.8 %, 4.8 %, 3.0 %, 2.3 % and 2.5 % of the sample in ascending order. Moreover, businesses with a turnover above ZAR 26 million constitute 15.8 % of the sample. Based on total annual turnover, this sample may have a significant proportion of micro enterprises, very small businesses and medium-sized businesses depending on the economic sector in which they are active.

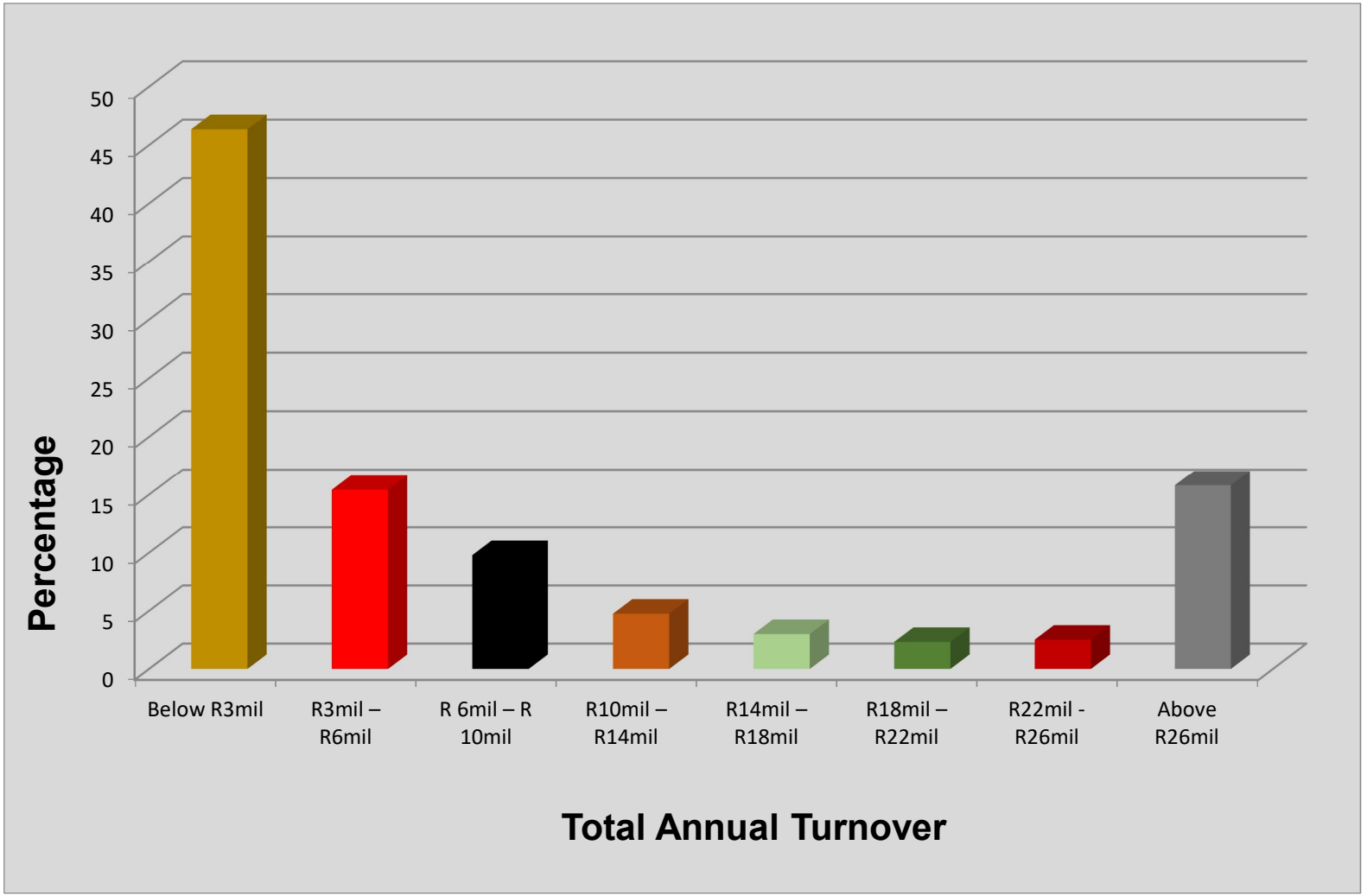

Figure 6.3: Sample distribution by total annual turnover (n = 1,031)

6.2.9 Total Gross Asset Value

The National Small Business Act of 2003 identifies total gross asset (TGA) value (excluding fixed property) of a business as another criterion for classifying small businesses which this study adopts. Table 6.6 shows the total gross asset distribution for the sample in this study.

Table 6.6: Total gross asset distribution

Total Gross Asset Value	Frequency	Percentage (%)
≤ ZAR 500 000	452	43.8
ZAR 500 000 to ZAR 1 000 000	172	16.7
ZAR 1 000 001 to ZAR 1 500 000	75	7.3
ZAR 1 500 001 to ZAR 2 000 000	39	3.8
ZAR 2 000 001 to ZAR 2 500 000	28	2.7
ZAR 2 500 001 to ZAR 3 000 000	37	3.6
ZAR 3 000 001 to ZAR 3 500 000	14	1.4
ZAR 3 500 001 to ZAR 4 000 000	17	1.6
ZAR 4 000 001 to ZAR 4 500 000	8	0.8
ZAR 4 500 001 to ZAR 5 000 000	24	2.3
≥ ZAR 5 000 000	165	16.0
Total	**1,031**	**100**

The respondents to this study were composed largely of businesses with a TGA value of less than ZAR 500 000 (452 businesses) which translates to 43.8 % of the sample. This could be attributed to an appreciable representation of businesses which are professional and consulting services in nature as they are not often typified by a high capital structure or high-value physical asset. Businesses with a TGA value of between ZAR 500 000 and ZAR1 000 000 take the second place and constitute 16.7 % of the sample. It is noteworthy that businesses with a TGA value

above R5 000 000 are represented similarly, comprising16 % of the sample. Other businesses that have a TGA value between ZAR 1 000 000 and ZAR 5 000 000 constitute 23.5 % of this sample.

Apparently most of the businesses represented in this sample are concentrated at the lower end of the distribution. This is consistent with Moos, Mohale and Moshoeshoe (2018:193) who note that 98 % of small businesses in South Africa are either micro-enterprises or very small businesses.

6.3 EVALUATING THE MEASUREMENT MODEL

In this study construct validity and reliability of the measurement instrument is assessed through factor analysis. Exploratory factor analysis (EFA) is used to determine the underlying factor structure of the collected data. Confirmatory factor analysis (CFA) is conducted to further assess the measurement model verifying the assumption that a relationship exists between the underlying latent construct(s).

Convergent validity and reliability of the measurement is obtained using the Cronbach's alpha co-efficient, composite reliability (CR) and the average variance extracted (AVE).

6.3.1 Exploratory Factor Analysis

Osborne (2014:3) states that EFA is a group of extraction and rotation techniques that are designed to model unobserved or latent constructs. EFA assumes that there are latent variables that give rise to the manifest (observed) variables in a reflective measurement model and the findings from this analysis are interpreted in the light of this. In this study, two EFA procedures were executed making use of different extraction methods. The initial EFA procedure commenced with the Kaiser-Meyer-Olkin (KMO) test for sampling adequacy and Bartlett's test of sphericity which assesses the suitability of the data for factor analysis. According to Pallant (2014:183), Bartlett's test of sphericity should be significant ($p < 0.05$) for the factor analysis to be considered appropriate. The KMO index ranges from 0 to 1 and a minimum value of 0.6 is considered appropriate for factor analysis. The KMO and Bartlett's test values for these data are respectively 0.919 and 11,170.793 and these are statistically significant given that the applicable *p*-value obtained was 0.000.

These values confirm the suitability of the data for the purpose of factor analysis. The dimensions of EO were factor analysed using principal component analysis (PCA) and varimax as the extraction and rotation method, respectively. Table 6.7 shows the rotated component matrix of the dimensions of EO.

Table 6.7: Initial exploratory factor analysis of the entrepreneurial orientation dimension: Rotated component matrix

Question Number	EO Items	Factor Components			
		1	2	3	4
Q1.15	**AN3**	0.853	0.118	0.055	0.082
Q1.17	**AN5**	0.826	0.083	0.102	0.125
Q1.16	**AN4**	0.800	0.083	0.109	0.113
Q1.14	**AN2**	0.798	0.221	0.152	0.063
Q1.13	**AN1**	0.784	0.185	0.138	0.090
Q1.18	**AN6**	0.606	0.100	0.061	0.083
Q1.4	**INNV2**	0.188	0.826	0.166	0.214
Q1.5	**INNV3**	0.178	0.825	0.177	0.203
Q1.6	**INNV1**	0.123	0.806	0.141	0.223
Q1.7	**PA1**	0.192	0.647	0.439	0.170
Q1.8	**PA2**	0.154	0.619	0.487	0.077
Q1.9	**PA3**	0.166	0.543	0.530	0.049
Q1.11	**CA2**	0.118	0.279	0.822	0.167
Q1.12	**CA3**	0.192	0.183	0.813	0.116
Q1.10	**CA1**	0.069	0.156	0.765	0.168
Q1.2	**RT2**	0.161	0.281	0.144	0.826
Q1.1	**RT1**	0.132	0.113	0.250	0.820
Q1.3	**RT3**	0.200	0.482	0.087	0.667

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalisation.

In Table 6.7 AN1 to AN6, INNV1 to INNV3, PA1 to PA3, CA1 to CA3 and RT1 to RT3 represent the items that measure “autonomy”, “innovativeness”, “pro-activeness”, “competitive aggressiveness” and “risk-taking”, respectively. Although Lumpkin and Dess (1996:140), and Hughes and Morgan (2007:659) posit that there are five dimensions of EO, the findings in the present study indicate four factors; with “innovativeness” and “pro-activeness” loaded as a single factor.

Table 6.8 shows the rotated component matrix for the two environmental variables: EH and ED. The items measuring these variables loaded into two factors as expected which is indicative of different constructs. However, two items (ED3 and ED4) were excluded as the loadings were less than 0.5.

Table 6.8: Initial exploratory factor analysis of environmental hostility and environmental dynamism dimensions: Rotated component matrix

Question Number	EH and ED Items	Factor Components	
		1	2
Q2.5	EH5	0.774	0.039
Q2.3	EH3	0.695	0.023
Q2.6	EH6	0.688	0.013
Q2.2	EH2	0.684	0.108
Q2.1	EH1	0.644	0.152
Q2.4	EH4	0.614	0.117
Q3.5	ED5	-0.120	0.771
Q3.2	ED2	0.136	0.750
Q3.1	ED1	0.228	0.610

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalisation.

“Extraction” relates to the process of reducing the number of dimensions being analysed from the number of variables in the data set (and matrix of associations)

into a smaller number of factors (Osborne, 2014:8). It involves determining the smallest number of factors that can be used best to represent the inter-relationships among the set of variables (Pallant, 2011:183). There is a variety of approaches that can be used to identify (extract) the number of underlying factors or dimensions. Depending on the particular type of extraction, the association matrix being analysed can be a matrix of simple correlations or co-variances. Amongst other extraction techniques the principal axis factor (PAF) extraction technique tends to be favoured when multi-variate normality of the variables is not a plausible assumption (Osborne, 2014:9). Results of the one-sample Kolmogorov Smirnov test indicate that the data obtained may not be distributed normally, therefore, the PAF extraction technique was considered in another EFA procedure using varimax rotation. The analysis resulted in the KMO and Bartlett's test values of 0.904 and 13983.782, respectively, and these are found to be statistically significant given the *p*-value of 0.000, reconfirming the suitability of the data for factor analysis.

In the second EFA procedure, the items measuring all eight constructs were analysed together. As shown in Table 6.9, the items loaded into seven factors, indicating seven constructs. The risk-taking items (RT1 to RT3) and the competitive aggressiveness items (CA1 to CA3) loaded as separate factors. The autonomy items (A1 to A6) loaded as one factor and the innovativeness and pro-activeness items (Q1.4 to Q1.9) loaded together as a single underlying factor. This further confirms the strong correlation between the innovativeness and pro-activeness dimensions of EO as observed earlier in the first EFA procedure. In the second (final) procedure, the items capturing environmental hostility (EH1 to EH6) and environmental dynamism (ED1 to ED5) loaded as two factors as expected. However, two of the items (ED3 and ED4) showed comparatively lower loadings, hence, they were excluded in further analysis based on the minimum value of 0.35 as adopted by Lotz and van der Merwe (2013:23). The analysis also revealed that employment growth (EG) indicated by the annual growth rate of employees (g_e) loaded separately as one factor.

The factor loadings are based on the Kaiser's Eigen value criterion of initial Eigen values being greater than one. The seven factors identified account for 62.92 % of the total variance explained. The variations explained by factors 1, 2, 3, 4, 5, 6 and 7 represent 26.51 %, 10.19 %, 8.54 %, 6.17 %, 4.41 %, 3.75 % and 3.01 %, respectively.

Table 6.9: Final exploratory factor analysis of entrepreneurial orientation, environmental hostility and environmental dynamism dimensions: Rotated factor matrix

Rotated Factor Matrix[a]								
Question Number	Indicator Items	Factors						
		1	2	3	4	5	6	7
Q1.1	RT1	0.241	0.155	0.158	0.170	0.621	0.042	0.081
Q1.2	RT2	0.335	0.177	0.121	0.072	0.792	0.038	0.052
Q1.3	RT3	0.489	0.217	0.084	0.041	0.555	0.139	0.033
Q1.4	INNV1	0.757	0.141	0.023	0.065	0.181	0.147	-0.025
Q1.5	INNV2	0.814	0.200	0.026	0.064	0.161	0.136	0.004
Q1.6	INNV3	0.817	0.188	0.075	0.059	0.149	0.113	-0.001
Q1.7	PA1	0.675	0.204	0.122	0.305	0.150	0.003	0.031
Q1.8	PA2	0.635	0.170	0.041	0.370	0.104	-0.027	-0.006
Q1.9	PA3	0,558	0,179	0,013	0,422	0,091	0,031	0,002
Q1.10	CA1	0.316	0.075	0.385	0.527	0.104	0.034	-0.027
Q1.11	CA2	0.412	0.122	0.153	0.739	0.157	-0.031	-0.027
Q1.12	CA3	0.331	0.192	0.209	0.664	0.105	-0.038	-0.008
Q1.13	AN1	0.208	0.746	0.024	0.110	0.077	-0.024	0.083
Q1.14	AN2	0.243	0.778	0.012	0.118	0.043	-0.027	0.151
Q1.15	AN3	0.124	0.828	0.029	0.042	0.062	0.025	0.057
Q1.16	AN4	0.115	0.747	0.110	0.070	0.094	0.007	-0.064
Q1.17	AN5	0.094	0.787	0.069	0.093	0.104	0.096	-0.044
Q1.18	AN6	0.113	0.514	0.072	0.053	0.075	0.096	-0.125
Q2.1	EH1	0.039	0.103	0.561	-0.035	0.128	0.154	-0.037
Q2.2	EH2	0.078	0.087	0.594	-0.007	0.041	0.109	-0.023
Q2.3	EH3	0.074	0.028	0.624	0.080	0.060	0.039	-0.035
Q2.4	EH4	-0.020	0.000	0.512	0.080	0.042	0.066	0.178
Q2.5	EH5	0.087	0.021	0.718	0.140	0.033	-0.056	0.126
Q2.6	EH6	-0.031	0.035	0.608	-0.015	-0.011	-0.032	0.124
Q3.1	ED1	0.177	0.020	0.206	0.116	0.106	0.358	0.179
Q3.2	ED2	0.054	0.037	0.166	0.027	0.010	0.580	0.120
Q3.3	ED3	-0.003	-0.022	0.161	0.056	0.030	0.225	0.568
Q3.4	ED4	-0.015	-0.003	0.132	0.040	0.074	0.246	0.515
Q3.5	ED5	0.097	0.063	-0.054	-0.041	0.030	0.491	0.187
	g_e	-0.002	0.012	-0.020	0.059	-0.002	0.013	0.031

Extraction Method: Principal Axis Factoring.
Rotation Method: Varimax with Kaiser Normalisation.
a. Rotation converged in seven iterations.

Figure 6.4 presents a scree plot for the Eigen values. By presenting the Eigen values in a graph, the relative importance of each of the seven factors (namely, Proactive-Innovation, Autonomy, Environmental Hostility, Competitive Aggressiveness, Risk-taking, Environmental Dynamism and g_e) becomes apparent (Field, 2005). The cut-off point for selecting factors should be at the point of inflection of the curve. Based on Cattell's scree test (Catell, 1977), the graph in this analysis levelled off at the seventh factor as indicated.

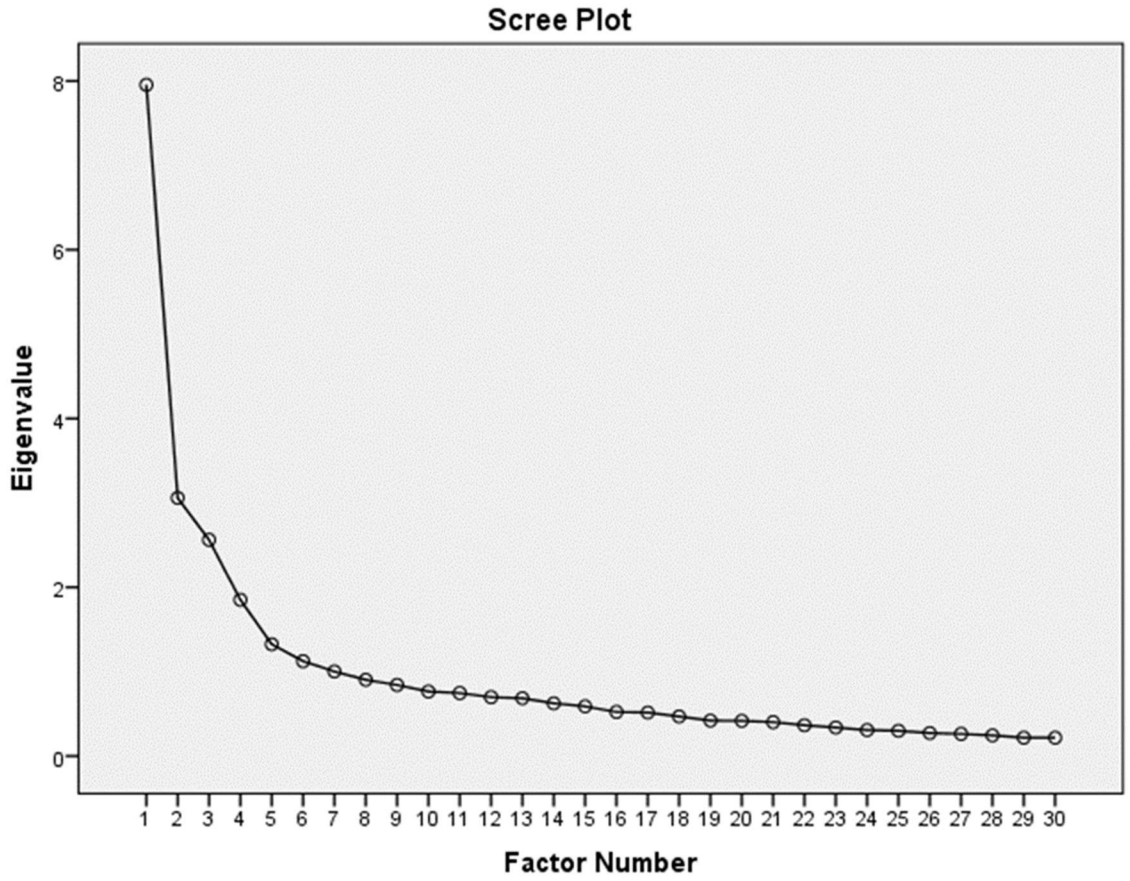

Figure 6.4: Scree plot for the Eigen values

6.3.2 Innovativeness and Pro-activeness as a Consolidated Construct

It was observed in the first and second EFA procedures that the dimensions of innovativeness and pro-activeness loaded as one factor which is indicative of a single underlying construct. An unexpected finding such as this is not uncommon with empirical studies on EO. For example, in a study by Richard, Barnett, Dwyer and Chadwick (2004) the dimensions of innovativeness, risk-taking and pro-

activeness were explored using Covin and Slevin's (1989) EO scale. Factor analysis of nine component items was carried out and a two-factor solution was obtained (Richard *et al.,* 2004:259). It resulted in five items loading as one "risk-taking" factor and two items loading as a single "innovativeness" factor. Two of the items were not included due to low loadings. Thus, their analysis did not result in a separate factor for pro-activeness. However, in other studies (Yoo, 2001; Soininen *et al.,* 2012; Matchaba-Hove & Goliath, 2016; Neneh & van Zyl, 2017), pro-activeness loaded with innovativeness as a single factor.

Contemporary EO researchers, Anderson, Kreiser, Kuratko, Hornsby and Eshima (2015) – who have attempted to reconceptualise EO – assert that the construct consists of two non-interchangeable dimensions of entrepreneurial behaviour (a combination of innovativeness and pro-activeness) and managerial risks. Although they propose EO as a multi-dimensional construct, they assert that there is a positive co-variance between innovativeness and pro-activeness and both dimensions are necessary for EO to exist. This argument is consistent with the earliest and seminal definition of an entrepreneurial firm which asserts that:

> An entrepreneurial firm is one that engages in product-market innovation undertakes somewhat risky ventures and is first to come up with **pro-active innovations**, beating competitors to the punch [Miller, 1983:771].

According to Shafaeddin (2014) "proactive-innovation" refers to an innovation approach in which a firm continually delineates new opportunities and challenges by pro-actively seeking different perspectives and tapping into inside and outside knowledge bases as a means of generating insights and ideas for new products, services, solutions, and even new business models. Furthermore, Shafaeddin (2014) expounds that pro-actively innovative firms commercialise their innovations far ahead of their followers to create value for buyers. This perspective bears similarity to perspectives from Miller (1983) as well as Covin and Slevin (1989) who argue that the dimensions need to co-vary for EO to exist. It is, however, inconsistent with the view of Lumpkin and Dess (1996:151) as well as Hughes and Morgan (2007:652) who posit that the dimensions can vary independently.

Furthermore, Anderson *et al.* (2015:1583) point out two reasons for collapsing the innovativeness and pro-activeness components of EO into a single latent construct which they labelled "entrepreneurial behaviour". The first being that there is little

face validity in the *a priori* assumption of an attitudinal element of innovativeness and pro-activeness. This assertion stems from observations by Miller (1983:771) and Covin and Slevin (1991:77) that what gives meaning to innovation are actions involving development of new products, processes, or business models; similarly, pro-activeness does not exist without a firm actually entering a new market ahead of competitors and "acting in anticipation of future demand" (Lumpkin & Dess, 2001:431). As such, entrepreneurial behaviour must be observable and derive its meaning from actions that can be considered entrepreneurial. Therefore, entrepreneurial behaviour is itself an expression of lower-order components of innovativeness and pro-activeness. Anderson *et al.* (2015:1583) argue that, under the conceptual domain of entrepreneurial behaviour, innovativeness and pro-activeness are inextricably confounded.

This confounding leads to the second reason for aggregating "innovativeness" and "pro-activeness" into a single dimension. It is suggested that while "innovation" is a necessary condition for entrepreneurship, it is neither sufficient nor is it meaningfully independent from "pro-activeness" (Anderson *et al.,* 2015:1583; Rosenbusch, Brinckmann, Bausch, 2011:441). As a matter of fact, Lumpkin and Dess (1996:148), who have made notable contributions to EO, state that because pro-activeness suggests an emphasis on initiating activities, it is closely related to innovativeness and will probably co-vary with it from an empirical standpoint. In the light of these arguments and the statistical results obtained in this study, it would, therefore, seem conceptually inconsistent to create a theoretical distinction between pro-activeness and innovativeness as they are functionally equivalent reflections of an underlying entrepreneurial behaviour. Consequently, rather than have pro-activeness and innovativeness as independent constructs, this study considers them as a single dimension of EO. This necessitates a restatement of the study's hypotheses that have a bearing on these two constructs.

6.3.3 Restatement of Hypothesis

In acknowledgement of the results from the first and second EFA procedures in which innovativeness and pro-activeness have loaded as a single factor, henceforth in this study, they will be referred to as "proactive-innovation" (PA-INNV). This follows the precedent of Neneh and van Zyl (2017) as well as Matachba-Hove and Goliath (2016) who examined the dimensions of EO amongst SMEs in South Africa and found the same result. Therefore Factor 2 in Table 6.7 and Factor 1 in Table 6.9

will now be considered as “proactive-innovation” (PA-INNV) in subsequent analyses. Against this background, it was considered appropriate to restate the research hypotheses related to pro-activeness and innovativeness. Hence Table 6.10 presents the consolidation of eight hypotheses relating to pro-activeness and innovativeness into four, providing expression for proactive-innovation.

Notably the hypothesis related to **innovativeness** presented a negative relationship with environmental hostility, while the hypothesis related to **pro-activeness** presented a positive relationship with environmental hostility. This posed a challenge given that both dimensions are now considered a single construct. Considering this challenge and mindful of not resolving the hypothesis related to proactive-innovation in favour of innovativness or pro-activeness, the researcher elected to restate the combined hypothesis (***$H_{2\&6}$***) in a non-directional manner. Consequently, it is hypothesised that

$H_{2\&6}$: Environmental hostility has a relationship with small business proactive-innovation.

Table 6.10: Initial and restated hypotheses

Initial Hypotheses		Restated Hypotheses	
Hypothesis No	**Statement**	**Hypothesis No**	**Statement**
H_1	***Environmental dynamism*** has a positive relationship with small **businesses** innovativeness.	$H_{1\&5}$	***Environmental dynamism*** has a positive relationship with small business proactive-innovation.
H_5	***Environmental dynamism*** has a positive relationship with small business pro-activeness.		
H_2	***Environmental hostility*** has a negative relationship with small businesses innovativeness.	$H_{2\&6}$	***Environmental hostility*** has a relationship with small business proactive-innovation.
H_6	***Environmental hostility*** has a positive relationship with small business pro-activeness.		
H_3	***Small business innovativeness*** has a positive relationship with employment growth.	$H_{3\&7}$	Small business ***proactive-innovation*** has a positive relationship with employment growth.
H_7	***Small business pro-activeness*** has a positive relationship with employment growth.		
H_4	***Environmental dynamism and hostility*** moderate the relationship between small business innovativeness and employment growth.	$H_{4\&8}$	***Environmental dynamism and hostility*** moderate the relationship between small business proactive-innovation and employment growth.
H_8	***Environmental dynamism and hostility*** moderate the relationship between small business pro-activeness and employment growth.		

Source: Author's own compilation.

6.3.4 Confirmatory Factor Analysis

Although using EFA, an underlying factor structure has been established amongst the items based on the results, the measurement model can be validated further through confirmatory factor analysis (CFA). Unlike EFA in which the researcher can pre-specify only the number of factors, CFA allows for testing a much more parsimonious solution by indicating the number of factors, the pattern of factor loadings (and cross-loadings, which are usually fixed to zero), and an appropriate error theory (for example, random or correlated indicator error) (Hair, Black, Babin & Anderson, 2010). CFA further allows for the specification of relationships among the indicator uniqueness (error variances), which may have substantive importance (for example, correlated errors due to method effects). Thus, every aspect of the CFA model is specified in advance. The acceptability of the specified model is evaluated by goodness-of-fit tests and the interpretability as well as the strength of the resulting parameter estimates.

Figure 6.5 presents the measurement model as specified in the CFA procedure for analysis of the six latent variables (RT, PA-INNV, CA, AN, EH and ED) that were considered. Results of the correlation analysis does not show a relationship between annual growth rate in employment and the other variables, therefore it was excluded. Thus, it addresses exclusively the relationships between the dimensions of EO, environmental hostility and environmental dynamism. It is noteworthy that items ED3 and ED4 have been excluded because they have factor loadings below 0.35.

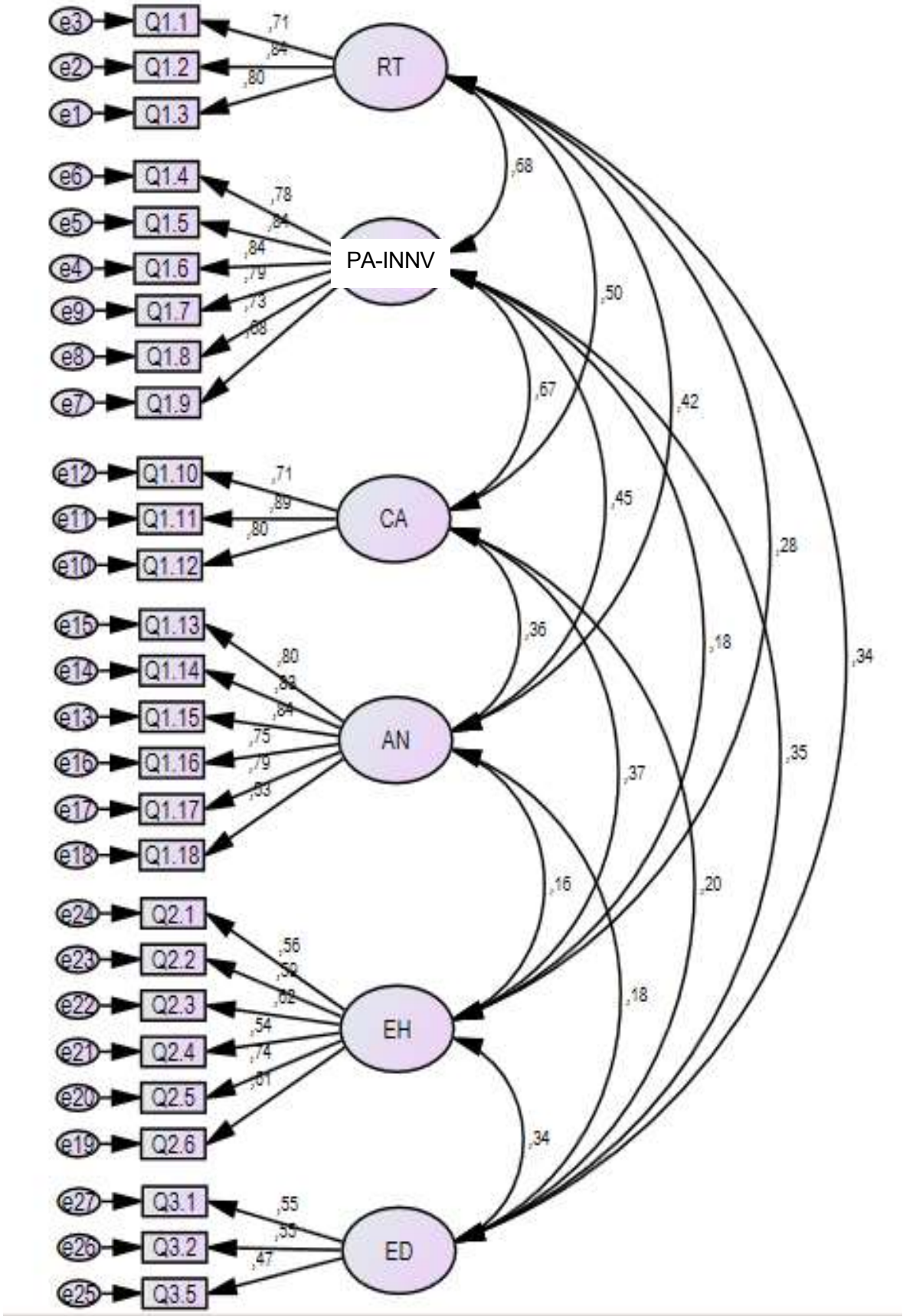

Figure 6.5: Final measurement model through confirmatory factor analysis

Table 6.11 presents the model fit summary which shows that the model can be accepted based on the CFI and TLI measures. Considering the RMSEA and SRMR (which are both absolute fit indices), the model is also acceptable as the values are close to, and fall below, the threshold values as stipulated in respective studies shown in Table 6.11. Since the *p*-value is significant using a Type I error rate of ≤ 0.05, at least one absolute fit and one incremental fit can be relied on to accept the model fitness. Against this background the Hughes and Morgan (2007), Slevin and Covin (1997), and Miller and Friesen (1982) scales may be considered valid measurement instruments and were consequently used to measure the dimensions of EO, environmental hostility and environmental dynamism, respectively. In addition, it validates the connection between the business environment and the sub-dimensions of EO empirically.

6.4 DESCRIPTIVE STATISTICS OF THE MEASUREMENT SCALES

Having validated the measurement model this section reports the findings analysing the responses to each of the items in the research instrument. It describes the data collected using each scale in terms of the mean, standard deviation, skewness and kurtosis for each of the items. These items are the observable variables that are reflective of the latent constructs being measured in this study.

6.4.1 Entrepreneurial Orientation Scale

Hughes and Morgan's (2007) 7-point Likert scale was used to measure five dimensions of EO which is now considered as four dimensions based on validation of the construct.

Table 6.11: Confirmatory factor analysis model fit summary

Goodness-of-Fit Index	Recommended Values for Acceptable Model Fit	Relevant Literature	Value in this Study	Remark
Chi-Square (X^2)	Dependent on sample size and number of parameters available.	Hair *et al.* (2010)	1598.856	Accepted.
Degree of Freedom (DF)	Dependent on number of observed variables and estimated free parameters.	Hair *et al.* (2010)	309	Accepted.
***p*-value**	< 0.05	Hair *et al.* (2010)	0.000	Accepted.
CMIN/DF	< 2.0 is considered a very good fit. > 2.0 and < 5.0 is considered acceptable.	Hair *et al.* (2010)	5.174	Not accepted.
Tucker Lewis Index (TLI)	> 0.9 is considered acceptable.	Hu and Bentler (1999)	0.890	Accepted as value is very close to threshold.
Comparative Fit Index (CFI)	> 0.9 is considered acceptable.	Hu and Bentler (1991) Hair *et al.* (2010)	0.903	Accepted.
Root Mean Square Error of Approximation (RMSEA)	≤ 0.06	Hu and Bentler (1999)	0.064	Accepted.
Root Mean Square Residual (RMR)	Smaller values indicate a better fit. 0 indicates a perfect fit.	Schreiber *et al.* (2006)	0.132	Accepted.
Standardised Root Mean Square Residual (SRMR)	≤ 0.08	Hu and Bentler (1999)	0.052	Accepted.

Source: Author's own compilation.

Table 6.12 shows the eighteen items (observed variables) measuring the four dimensions of EO as adopted in this study; risk-taking (Q1.1 to Q1.3), proactive-innovation (Q1.4 to Q1.9.), competitive aggressiveness (Q1.10 to Q1.12) and autonomy (Q1.13 to Q1.18).

For risk-taking, the mean of the three items (in this 7-point Likert scale) is 4.81, hence the respondents in this study probably agreed with the statements, indicating propensity for risk in their businesses.

For proactive-innovation, the mean is 5.23, hence the respondents definitely agreed with the statements, indicating that their businesses are somehow pro-active and innovate.

For competitive aggressiveness, the mean is 4.92, indicating that the respondents probably agreed with the statements. Supposedly competitively aggressive behaviour is displayed amongst the responding businesses.

Similarly, the mean for autonomy is 4.95, also indicating the respondents' position that autonomous behaviour is exhibited.

In summary, with an average mean value of 5.01 and a standard deviation of ± 1.515, these findings indicate that respondents clearly perceive EO as being demonstrated in their businesses. This finding is consistent with studies conducted by Fatoki (2012), Basardien, Parker, Boyat, Friedrich and Appoles (2014) and Urban (2018) who show evidence of EO across small businesses in South Africa. However, these results (as found in this study) do not necessarily qualify as indicative of high EO. This is because the mean values suggest a moderate level display of EO for all dimensions except proactive-innovation.

Table 6.12: Descriptive statistics for entrepreneurial orientation scale (n = 1,031)

Question Number	EO Dimension	Item Statement	Item Mean	EO Mean	SD	Skewness	Kurtosis
Q1.1	**Risk taking**	The term “risk taker” is considered a positive attribute for people in our business.	4.59	4.81	± 1.773	-0.523	-0.742
Q1.2		People in our business are encouraged to take calculated risks with new ideas.	4.94		± 1.617	-0.803	-0.118
Q1.3		Our business emphasises both exploration and experimentation for opportunities.	4.91		± 1.611	-0.702	-0.263
Q1.4	**Proactive-Innovation**	Our business actively and often introduces improvements and innovations.	5.28	5.23	± 1.500	-0.962	0.386
Q1.5		Our business is creative in its methods of operation.	5.24		± 1.462	-0.947	0.541
Q1.6		Our business seeks out new ways to do things.	5.53		± 1.396	-1.217	1.315
Q1.7		We always try to take initiative in every situation (for example, against competitors, in projects and when working with others).	5.47		± 1.306	-1.065	1.153
Q1.8		We excel at identifying opportunities.	5.12		± 1.381	-0.668	0.075
Q1.9		We initiate actions to which other organisations respond.	4.73		± 1.496	-0.470	-0.300

Question Number	EO Dimension	Item Statement	Item Mean	EO Mean	SD	Skewness	Kurtosis
Q1.10	**Competitive Aggressiveness**	Our business is intensely competitive.	5.26	4.93	± 1.475	-0.730	-0142
Q1.11		In general, our business takes a bold or aggressive approach when competing.	4.80		± 1.513	-0.464	-0.379
Q1.12		Our business tries to undo and out-manoeuvre the competition as best as we can.	4.72		± 1.634	-0.499	-0.531
Q1.13	**Autonomy**	Employees are permitted to act and think without interference.	4.89	4.95	± 1.492	-0.656	-0.037
Q1.14		Employees perform jobs that allow them to make and instigate changes in the way they perform their work tasks.	4.90		± 1.462	-0.723	0.097
Q1.15		Employees are given freedom and independence to decide on their own how to go about doing their work.	4.68		± 1.591	-0.529	-0.482
Q1.16		Employees are given freedom to communicate without inference.	5.26		± 1.403	-0.964	0.681
Q1.17		Employees are given authority and responsibility to act alone if they think it to be interest of the business.	4.86		± 1.572	-0.696	-0.180
Q1.18		Employees have access to all vital information.	5.10		± 1.593	-0.875	0.136

6.4.2 Environmental Hostility Scale

Slevin and Covin's (1997) 7-point scale was used to measure environmental hostility (EH). Table 6.13 shows the six items (Q2.1 to Q2.6) that reflect environmental hostility as a construct. The mean values of the items range from 3.78 to 5.59. Notably, the means for four out of six items are between 4 and 5 and only one item is above 5. Therefore, respondents to this study perceive the environment around which small businesses operate in South Africa as possibly hostile.

6.4.3 Environmental Dynamism Scale

Miller and Friesen's (1982) scale was adopted for measuring environmental dynamism. This is a 7-point sliding scale with five pairs of statements as shown in Table 6.14, indicating the extent to which the environment is considered as stable or dynamic. Based on the results of validating the measurement model where two of the items were excluded due to very low loadings, only items 3.1, 3.2 and 3.5 are being considered in this study. They have mean values of 4.27, 3.80 and 4.10, respectively. With an overall mean value of 4.03, staticity of the environment cannot be deduced. However, it cannot be said that the environment is moderately dynamic. Hence the respondents to this study perceive a very low rate of dynamism within the environment that small businesses operate.

6.4.4 Employment Growth Measurement

The questionnaire used in this study required respondents to provide the number of workers employed by their businesses at firm birth, transition from start-up to an established business, and currently. It was found that the mean number of workers at firm birth, transition into the established phase, and currently are 6.49, 15.46 and

Table 6.13: Descriptive statistics for environment hostility scale (n = 1,031)

Question Number	Item Statement	Item Mean	SD	Skewness	Kurtosis
Q2.1	The failure rate of firms in my industry is high.	4.57	± 1.687	-0.459	-0.639
Q2.2	My industry is very risky such that one bad decision could easily threaten the viability of my business unit.	4.63	± 1.751	-0.434	-0.882
Q2.3	Competitive intensity is high in my industry.	5.59	± 1.464	-1.317	1.251
Q2.4	Customer loyalty is low in my industry.	3.78	± 1.851	-0.140	-1.150
Q2.5	Severe price wars are characteristics of my industry.	4.50	± 1.828	-0.239	-1.056
Q2.6	Low profit margins are characteristic of my industry.	4.59	± 1.800	-0.332	-0.978

Table 6.14: Descriptive statistics for environmental dynamism scale (n = 1,031)

Question Number	Item Statements		Mean	SD	Skewness	Kurtosis
Q3.1	Our firm must rarely change its marketing practices to keep up with market and competitors.	Our firm must change its marketing practices extremely frequently.	4.27	± 1.682	-0.240	-0.841
Q3.2	The rate at which services are getting obsolete in the industry is very slow.	The rate at which services become obsolete in the industry is very high.	3.80	± 1.656	0.051	-0.807
Q3.3	Actions of competitors are quite easy to predict.	Actions of competitors are unpredictable.	4.03	± 1.606	-0.090	-0.793
Q3.4	Demand and tastes are fairly easy to forecast.	Demands and tastes are almost unpredictable.	3.86	± 1.573	0.087	-0.675
Q3.5	The service technology used in our business is not subject to very much change and is well established.	The modes of services used in our business change often and in a major way.	4.10	± 1.803	-0.114	-1.062

48.98, respectively, as indicated in Table 6.15. Since this is obtained on a ratio scale, it indicates the number of workers employed by the businesses at different phases of growth. In the present study, employment growth (EG) is indicated by the annual growth rate in employment (g_e) of the businesses. This parameter is computed using Gibrat's Law of proportionate effect which is obtained using the number of workers at firm birth, current number of workers and the period over which the business has been in operation. In computing EG, Gibrat's Law is expressed as:

$$e_c = e_{fb}(1 + g_e)^{(c-fb)}$$

Where:

- c is current year of operation
- fb is firm birth year
- e_c is the current number of employees
- e_{fb} is the number of employees at firm birth
- g_e is the annual growth rate of the number of employees

The mean value of EG as indicated by g_e for the businesses evaluated in this study is 15.89 workers. This confirms empirically an aggregate level of positive employment growth for the sample in this study.

6.5 STRUCTURAL EQUATION MODELLING

In explicating the relationships between environmental dynamism, environmental hostility and the dimensions of EO, Partial Least Square–Structural Equation Modelling (PLS-SEM) was employed in this study. In this regard, it gave rise to statistical outcomes such as outer loadings and indicator reliability, Cronbach's alpha, composite reliability and average variance extracted. Statistical procedures which measure discriminant validity such as Fornell-Lacker Criterion and Heterotrait-Monotrait Approach are also included.

Table 6.15 Descriptive statistics for employment growth scale (n = 1,031)

Question Number	Item Question	Mean	Skewness	Kurtosis
Q4.1	How many workers were employed by the business when it started?	6.49	29.58	916.75
Q4.2	How many workers were employed by the business at 3.5 years old?	15.46	26.14	766.19
Q4.3	How many workers are employed by the business currently?	48.98	22.32	581.68
	g_e (annual growth rate in employment).	15.89	30.02	935.79

6.5.1 Outer Loadings and Indicator Reliability

The outer model is the measurement model consisting of indicators and the path connecting them to the representative factors (latent variable). Outer model loadings are considered in reflective measurement models which are applicable to this study. The loadings represent the path from a factor to its representative indicator variables. It amounts to the absolute contribution of the indicator to the definition of its latent variable.

According to Garson (2016:60) measurement loadings are the standardised path weights connecting the factors to the indicator variables. As data are standardised (normalised) automatically in SmartPLS, the loadings vary from 0 to 1. However, they must be statistically significant to be accepted. In general, the larger the loadings, the stronger and more reliable the measurement model is. Indicator reliability may be interpreted as the square of the measurement loading (Wong, 2013:21; Hair *et al.,* 2014:103). For example, an indicator loading of 0.633 translates to a reliability indicator of $(0.633)^2 = 0.40$.

The outer model loadings of the indicator variables (items) considered in the relationship between EH, ED and EO are presented in Table 6.16. They can be a form of item reliability co-efficients as well and the closer the loadings are to 1.0, the more reliable that latent construct is. By convention, for a well-fitting reflective model, path loadings should be above 0.70 (Henseler, Ringle, & Sarstedt, 2012:269). It is noteworthy that a loading of 0.70 is the level at which about half the variance in the indicator is explained by its factor and is also the level at which explained variance must be greater than error variance. For indicator reliability, although values above 0.70 are preferred, values not less than 0.40 are considered acceptable (Hulland, 1999). As shown in Table 6.16, indicator reliability for all the items is above 0.40 except for ED5, EH4 and EH6.

Table 6.16: Outer loadings and indicator reliability

Indicator Item	AN	CA	ED	EH	PA-INNV	RT	Indicator Reliability
AN1	0.805						0.648
AN2	0.821						0.674
AN3	0.849						0.721
AN4	0.828						0.685
AN5	0.852						0.725
AN6	0.651						0.423
CA1		0.885					0.783
CA2		0.867					0.751
CA3		0.838					0.702
ED1			0.862				0.743
ED2			0.644				0.414
ED5			0.572				0.327
EH1				0.676			0.457
EH2				0.696			0.484
EH3				0.735			0.540
EH4				0.595			0.354
EH5				0.787			0.619
EH6				0.619			0.383
PA1					0.825		0.680
PA2					0.870		0.757
PA3					0.874		0.764
INNV 1					0.823		0.677
INNV 2					0.773		0.597
INNV 3					0.731		0.534
RT1						0.838	0.702
RT2						0.890	0.792
RT3						0.850	0.722

6.5.2 Cronbach's Alpha, Composite Reliability and Average Variance Extracted

Since the measurement model is reflective in nature, three measures of reliability are considered in this study using PLS-SEM; the internal consistency of the measurement items is assessed using the Cronbach's alpha co-efficient and the composite reliability (CR) which estimates the extent to which a set of latent constructs share the measurement of a construct (Hair *et al.,* 2010). In addition, the average variance extracted (AVE) which assesses convergent validity is considered. In this study, Smart-PLS is used to obtain the convergent validity (indicating reliability) of the measurement constructs and the results are presented in Table 6.17. In addition, the average variance extracted is presented which assesses discriminant validity (Gordon, 2016:65).

Table 6.17: Construct reliability analysis

Measurement Construct	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
AN	0.889	0.916	0.646
CA	0.837	0.898	0.746
ED	0.535	0.740	0.495
EH	0.780	0.842	0.473
PA-INNV	0.901	0.923	0.669
RT	0.823	0.895	0.739

According to Gordon (2016:63) and Pallant (2001:97), Cronbach's $_2$alp$_h$a and composite reliability values of 0.70 and above are considered acceptable for confirmatory purposes and AVE values should be above 0.50 in an adequate model (Hock & Ringle, 2006:15). In Table 6.17 all the Cronbach's alpha values are above 0.7 except for that associated with ED. With reference to ED, it is noted that the reliability assessment turned a Cronbach Alpha value of 0.535. According to Hinton, Brownlow, McMurray and Cozens (2004) this an indication of moderate reliability,

and so the scale can be utilized. Even though, this value is less than the commonly accepted standard of 0.7, Di Iorio (2005) argues that the value of 0.7 should not be the only standard used to asses reliability. The AVE values are all above 0.5 for the dimensions of the measurement constructs except for ED and EH. AVE is a conservative measure of convergent validity and researchers can conclude on the basis of CR, that the latent construct is acceptable even though more than 50 % of the variance is attributable to error (Wong 2013:21). Hence, for this measurement model based on CR values, all the constructs presented can be considered reliable. Moreover, while determining the internal consistency of measurement items using Cronbach's alpha value as an assessment of reliablity of measurement scales, composite reliabilty provides a more appropriate measure of reliability under identical research conditions (Peterson & Kim, 2013:197). Hair, Sarstedt, Hopkins and Kuppelwieser (2014:111) provide two reasons that this is the case. Firstly, unlike Cronbach's alpha, composite reliability does not assume that all indicator loadings are equal in the population, which is in line with the working principle of the PLS-SEM algorithm that prioritises the indicators based on their individual reliabilities during model estimation. Secondly, Cronbach's alpha is sensitive to the number of items in the scale and generally tends to under-estimate internal consistency reliability. By using composite reliability, PLS-SEM is able to accommodate different indicator reliabilities (that is, differences in the indicator loadings), while also avoiding the under-estimation associated with Cronbach's alpha. Therefore, in this study, composite reliability is considered as the preferred statistic for assessing reliability. As shown in Table 6.17 the latent constructs have values that are above the 0.7 threshold.

6.5.3 Fornell-Larcker Criterion

Discriminant validity represents the extent to which a construct is empirically distinct from other constructs. In other words, the construct measures what it is intended to measure (Hair *et al.,* 2014:112). The Fornell-Larcker criterion establishes discriminant validity (Garson, 2016:67; Kavari, 2016:208) of a set of constructs. It stipulates that for any latent construct, the square root of the average variance extracted (AVE) should be higher than its correlation with any other construct. In Smart-PLS the output for discriminant analysis using the Fornell-Larcker criterion is

presented with the square root of AVE appearing in the diagonal cells and the correlations are found below it. In absolute value terms, if the top number (which is the square root of AVE) in any factor column is higher than the numbers (correlations) below it, then discriminant validity is confirmed (Garson, 2016:67). As shown in Table 6.18 discriminant validity is confirmed between the latent constructs in this measurement model.

Table 6.18: Results of Fornell-Larcker approach

Measurement Construct	AN	CA	ED	EH	PA-INNV	RT
AN	0.804					
CA	0.308	0.864				
ED	0.126	0.187	0.703			
EH	0.150	0.375	0.247	0.688		
PA-INNV	0.409	0.591	0.261	0.168	0.818	
RT	0.367	0.420	0.251	0.243	0.586	0.860

6.5.4 Heterotrait-Monotrait Approach

Although the use of the Fornell-Larcker criterion is an accepted method for assessing the discriminant validity of a PLS model, it has its limitations (Garson, 2016:69). Hensler, Ringle and Sarstedt (2015) used simulation studies to demonstrate that the lack of discriminant validity is better detected by the Heterotrait-Monotrait (HTMT) ratio. The HTMT ratio is the geometric mean of the heterotrait method correlations (that is, the correlations of indicators across constructs measuring different phenomena) divided by the average of the monotrait method correlations (that is, the correlations of indicator within the same construct). In a well-fitting model, heterotrait correlations should be smaller than monotrait correlations, meaning that the HTMT should be below 1.0. It is suggested that if the HTMT value is below 0.90, discriminant validity is established between a pair of

reflective constructs (Teo, Srivastava & Jiang, 2008:53; Hensler, Ringle & Sarstedt, 2015:121), although Clark and Watson (1995) and Kline (2011) use a more stringent cut-off of 0.85. As shown in Table 6.19 all the values associated with the constructs of the measurement model meet these criteria. From these statistical tests it can be confirmed that the measurement model is valid.

Table 6.19: Results of the Heterotrait-Monotrait approach

Latent Construct	AN	CA	ED	EH	PA-INNV	RT
AN						
CA	0.370					
ED	0.183	0.234				
EH	0.173	0.410	0.330			
PA-INNV	0.462	0.709	0.334	0.182		
RT	0.430	0.513	0.342	0.290	0.673	

6.6 INFERENTIAL STATISTICS

According to Mandengena (2016:121) inferential techniques are necessary to estimate the population values and test the hypothesised relationships. As indicated in Sections 5.8.3.2 and 5.8.3.3, respectively, regression analysis (RA) and Partial Least Square–Structural Equation Modelling (PLS-SEM) are statistical techniques adopted to test the hypotheses postulated in this study. However, correlation and multi-collinearity analyses were done prior to these techniques and the obtained results – with chosen statistical procedures – are presented in the following sections.

6.6.1 Correlation Analysis

Correlation analysis is a statistical procedure that indicates the association between two or more variables; the indicator statistic is the correlation co-efficient (*r*) (Leedy & Ormrod, 2015:249). In this study, risk-taking, proactive-innovation, competitive

aggressiveness, autonomy, environmental hostility, environmental dynamism and employment growth (indicated as the annual growth rate of employees) are assessed through Pearson Product Moment correlation analysis. This is expected to provide an understanding of strength and direction of the relationship between these variables. According to Cohen (1988:79) *r*-values ranging from 0.10 to 0.29 should be considered a “small” (weak) correlation; 0.30 to 0.49 a “medium” (moderate) correlation, and 0.50 to 1.0 a “large” correlation (strong).

Table 6.20 presents the correlation of the constructs in this study. The correlation co-efficients range from 0.128 to 0.614. As regards the relationships between the four dimensions of EO (RT, PA-INNV, CA, AN) and each of the environmental varibles (ED & EH) statistically significant positive associations can be observed. Similarly, ED and EH correlate with each other significantly. However, the relationships between EG and the dimenisons of EO – together with the environmental variables – are found to be statistically insignificant.

Therefore, considering this sample, risk-taking, proactive-innovative, competitive aggressive and autonomous behaviour can be associated with dynamism and hostility of the environment. In addition, environmental dynamism and hostility are associated with each other, therefore, they are not exclusively independent varibles but are related in some way. Nevertheless, the sample does not show any association between employment growth and the dimensions of EO. Consequently, based on the perceptions of all responding businesses (the entire sample), neither entrepreneurial orientation nor environment has a relationship with employment growth.

6.6.2 Multi-collinearity Analysis

It is necessary to consider the relationships among the independent variables and the possibility of multi-collinearity before proceeding with the relationships between them and the dependent variables using regression analysis and SEM techniques. Multi-collinearity exists when the independent variables are highly correlated.

Table 6.20: Correlation analysis

		RT	PA-INNV	CA	AN	EH	ED	EG
RT	Pearson Correlation	1	0.576**	0.426**	0.366**	0.232**	0.225**	0.006
	Sigma (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.851
	N	1,031	1,031	1,031	1,031	1,031	1,031	1,031
PA-INNV	Pearson Correlation	0.576**	1	0.614**	0.411**	0.146**	0.232**	0.018
	Sigma (2-tailed)	0.000		0.000	0.000	0.000	0.000	0.571
	N	1,031	1,031	1,031	1,031	1,031	1,031	1,031
CA	Pearson Correlation	0.426**	0.614**	1	0.320**	0.326**	0.133**	0.032
	Sigma (2-tailed)	0.000	0.000		0.000	0.000	0.000	0.305
	N	1,031	1,031	1,031	1,031	1,031	1,031	1,031
AN	Pearson Correlation	0.366**	0.411**	0.320**	1	0.142**	0.128**	0.019
	Sigma (2-tailed)	0.000	0.000	0.000		0.000	0.000	0.544
	N	1,031	1,031	1,031	1,031	1,031	1,031	1,031
EH	Pearson Correlation	0.232**	0.146**	0.326**	0.142**	1	0.208**	-0.010
	Sigma (2-tailed)	0.000	0.000	0.000	0.000		0.000	0.749
	N	1,031	1,031	1,031	1,031	1,031	1,031	1,031
ED	Pearson Correlation	0.225**	0.232**	0.133**	0.128**	0.208**	1	0.014
	Sigma (2-tailed)	0.000	0.000	0.000	0.000	0.000		0.665
	N	1,031	1,031	1,031	1,031	1,031	1,031	1,031
EG	Pearson Correlation	0.006	0.018	0.032	0.019	-0.010	0.014	1
	Sigma (2-tailed)	0.851	0.571	0.305	0.544	0.749	0.665	
	N	1,031	1,031	1,031	1,031	1,031	1,031	1,031

**Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).

(Pallant, 2011:151). Multi-collinearity in ordinary least square (OLS) regression inflates standard errors, makes significance tests of independent variables unreliable and prevents the researcher from assessing the relative importance of one independent variable compared to another (Garson, 2016:71). It does not contribute to good regression or SEM models; hence, it is necessary to check for it.

The variance inflation factor (VIF) and tolerance co-efficients are used to assess collinearity (Hair *et al.,* 2010:201). According to Garson (2016:71), problematic multi-collinearity may exist when the variance inflation factor (VIF) co-efficient is higher than 4.0 and the tolerance co-efficient is less than 0.25. Table 6.21 and Table 6.22 present the outer VIF values and inner VIF values, respectively. Since all the values found are below 4.0, multi-collinearity would not constitute a problem between the independent variables in this study.

6.6.3 Structural Model

The co-efficient of determination (R^2) and the level of significance of the path co-efficient are the primary evaluation criteria of the structural model or the inner model which refers to the relationships between the latent constructs. The amount of explained variance for each endogenous construct is indicated by the co-efficient of determination (R^2). Paths that show signs contrary to the hypothesised relationships or direction are non-significant and do not support the proposed causal relationship, whereas those showing signs in line with the hypothesised relationships are significant and support the proposed causal relationship (Hair *et al.,* 2011:147).

Table 6.21: Outer variance inflation factor values

Observable Variables	Variance Inflation Factor (VIF)
AN1	2.403
AN2	2.783
AN3	2.780
AN4	2.212
AN5	2.477
AN6	1.382
CA1	1.693
CA2	2.491
CA3	2.152
ED1	1.103
ED2	1.177
ED3	1.153
EH1	1.419
EH2	1.480
EH3	1.420
EH4	1.284
EH5	1.744
EH6	1.478
PA1	2.409
PA2	2.917
PA3	3.049
PA4	2.254
PA5	2.254
PA6	1.945
RT1	1.752
RT2	2.288
RT3	1.828

Table 6.22: Inner variance inflation factor values

Latent Construct	AN	CA	ED	EH	PA-INNV	RT
AN						
CA						
ED	1.065	1.065			1.065	1.065
EH	1.065	1,065			1.065	1.065
PA-INNV						
RT						

The co-efficient of determination (R^2) is a measure of the model's predictive accuracy. In simpler terms, R^2 represents the exogenous variable's combined effect on the endogenous variables. This effect ranges from 0 to 1, with 1 representing complete predictive accuracy. In this structural model, the co-efficient of determination for RT, PA-INNV, CA and AN are 0.096, 0.078, 0.148 and 0.029, respectively (Table 6.23). This implies that the two exogenous latent constructs, EH and ED, explain 9.6 %, 7.8 %, and 14.8 % and 2.9 % of the variances in RT, PA-INNV, CA and AN, respectively.

Table 6.23: Co-efficient of determination (R^2) for independent variables

Endogenous Latent Constructs	Co-efficient of Determination (R^2)	Adjusted R^2
RT	0.098	0.096
PA-INNV	0.080	0.078
CA	0.150	0.148
AN	0.031	0.029

Wong (2013:24) asserts that the path co-efficient will be significant if the t-statistic is larger than 1.96, using a two-tailed t-test at a 5 % level of significance. For the exogeneous constructs (EH & ED) and the endogenous constructs, the path relationships are positive and statistically significant for the hypothesised relationships. Figure 6.6 shows the t-statistic of the path co-efficient of the structural model. It is broken down further in Table 6.24.

Based on the structural model, as shown in Figure 6.6 and presented in Table 6.24, it is essential to put the hypothesised relationships into perspective and draw inferences from results of this analysis. Hence, the hypotheses relating to environmental dynamism, environmental hostility, risk-taking, proactive-innovation, competitive aggressivness and autonomy are considered in this section. It indicates for each of the relationships as shown in the structural model its associated hypothesis. It goes further to show the path coeffeicients, t-statistic and *p*-value*s* for each relationship. Fundamentally it states if the research hypotheses have been supported or not considering the analysis conducted on the sample in this study.

Table 6.24 details the statistical inferences of this analysis and shows that all the hypothesised relationships that link the two environmental variables with the four dimensions of EO were supported.

All hypothesised relationships were shown to be consistent with the prior theoretical explanation and they were all statistically significant (with *p*-value less than 0.05) and have a positive relationship. By and large, both environmental dynamism and hostility have a positive influence on all dimensions of entrepreneurial orientation based on the perception of small businesses in this study.

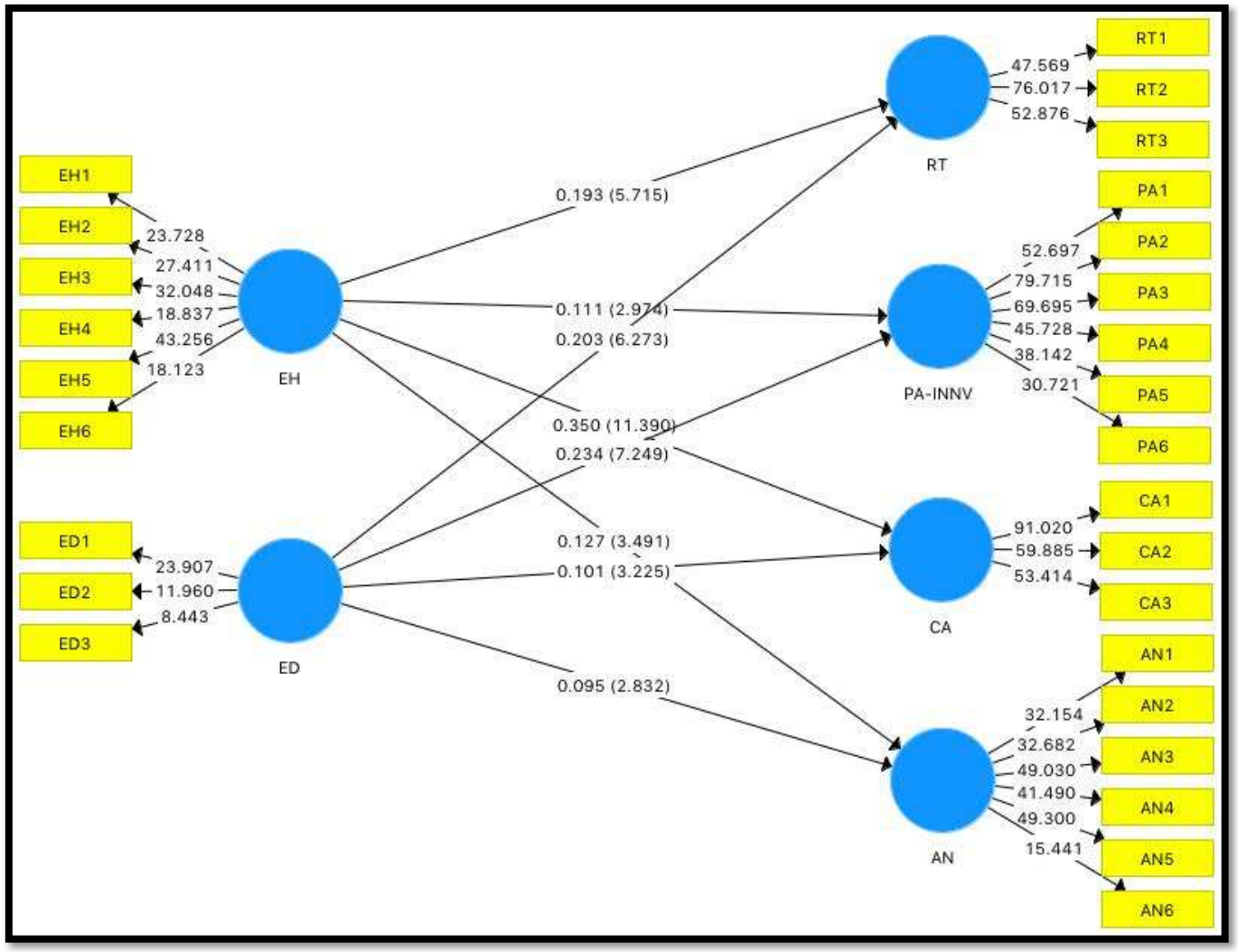

Figure 6.6: The t-statistic of the path co-efficient of the structural model

Table 6.24: Structural equation modelling results and statistical inferences

Hypothesised Relationship	Associated Hypothesis	Path Co-efficient	t-Statistic	*p*-Value	Hypothesis Supported/ Not Supported
EH → RT	H_{10}	0.193	5.715	0.000	Supported
EH → PA-INNV	$H_{2\&6}$	0.111	2.974	0.003	Supported
EH → CA	H_{14}	0.350	11.390	0.000	Supported
EH → AN	H_{18}	0.127	3.491	0.000	Supported
ED → RT	H_{9}	0.203	6.273	0.000	Supported
ED → PA-INNV	$H_{1\&5}$	0.234	7.249	0.000	Supported
ED → CA	H_{13}	0.101	3.225	0.001	Supported
ED → AN	H_{17}	0.095	2.832	0.005	Supported

Source: Author's own compilation.

Since the structural model has considered the relationships between the environmental variables (EH & ED) and the dimensions of EO (RT, PA-INNV, CA & AN), it is appropriate to scrutinise the other hypothesised relationships, such as the relationships between the dimensions of EO and employment growth (EG). Table 6.25 clarifies the correlation between these variables.

Table 6.25: Correlation between the dimensions of entrepreneurial orientation and employment growth (n = 1,031)

Correlating Variables	Associated Hypothesis	Correlation	Level of Significance	Hypothesis Supported/ Not Supported
Risk-Taking and Employment Growth (RT & EG)	H_{11}	0.006	0.851	Not supported
Proactive-Innovation and Employment Growth (PA-INNV & EG)	$H_{3\&7}$	0.018	0.571	Not supported
Competitive Aggressiveness and Employment Growth (CA & EG)	H_{15}	0.032	0.305	Not supported
Autonomy and Employment Growth (AN & EG)	H_{19}	0.019	0.544	Not supported
Source: Author's own compilation.				

Considering the entire sample of 1,031 respondents, it can be observed that a statistically significant relationship cannot be confirmed between any of the four dimensions of EO; RT, PA-INNV, CA, AN and employment growth. Therefore, hypotheses $H_{3\&7}$, H_{11}, H_{15}, and H_{19} have not been supported since their associated relationships present weak correlation values and are statistically insignificant.

As shown in Table 6.26, further analysis of these relationships, based on the categories of small businesses (micro enterprises, very small, small- and medium-

Table 6.26: Correlation analysis across the categories of business sizes

Size of Business	Correlation between employment growth and dimensions of EO						
			EG	RT	PA-INNV	CA	AN
Micro (1 to 5 employees)	**EG**	Pearson Correlation	1	0.021	0.018	-0.011	0.040
		Sigma (2-tailed)		0.706	0.747	0.844	0.472
		n	332	332	332	332	332
Very small (6 to 10 employees)	**EG**	Pearson Correlation	1	-0.064	-0.062	-0.093	-0.044
		Sigma (2-tailed)		0.340	0.352	0.163	0.512
		n	227	227	227	227	227
Small (11 to 50 employees)	**EG**	Pearson Correlation	1	0.081	0.014	0.035	0.009
		Sigma (2-tailed)		0.133	0.797	0.513	0.865
		n	348	348	348	348	348
Medium (51 and above)	**EG**	Pearson Correlation	1	-0.140	-0.235*	-0.229*	0.027
		Sigma (2-tailed)		0.164	0.018	0.022	0.793
		n	124	124	124	124	124

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

businesses) reveals a contrast to the prior finding. Among the medium-sized enterprises, a statistically significant, yet negative, association was found between proactive-innovation and employment growth (PA-INNV and EG), as well as between competitive aggressiveness and employment growth (CA and EG). In a sense, the fact that the determined statistical association between PA-INNV and EG is negative amongst medium sized businesses, provides further impetus for the study to assert that the positive relationship hypothesised between PA-INNV and EG, expressed in $H_{3\&7}$ is not supported. However, for this cohort of medium-sized businesses, H_{15} was found to be supported given the evidence of a satistically significant negative correlation between competitive aggressiveness and employment growth. Since association between components of EO and employment growth can be observed within a specific category of business, the size of the enterprise could play a moderating role or be a control variable between these relationships.

This study seeks to address the moderating role of environmental hostility and dynamism on the relationship between the dimensions of EO and employment growth. Hence multiple regression analysis was undertaken. This analysis considered the relationship between employment growth, the four dimensions of EO (PA-INNV, RT, CA & AN), environmental hostility and environmental dynamism. Table 6.27 and Table 6.28 present the results of the regression analysis. The analysis first considered the entire sample of respondents (n = 1,031). The summary of the results obtained in testing the four models (informed by the four EO dimensions) shows the relationships between EG as the dependent variable and PA-INNV, RT, CA and AN as the independent variables, with EH and ED as moderators. All the models were found to be statistically insignificant. Hence, the findings of this study do not confirm that the environment plays a moderating role on the relationships between the dimensions of EO and EG. On this account, $H_{4\&8}$, H_{12}, H_{16} and H_{20} are not supported.

Furthermore, since the correlation analysis yielded interesting results as regards the relationship between the four dimensions of EO and EG for medium-scale enterprises, a similar statistical analysis was carried for this specific category of business. The second regression analysis considered a smaller sample (n = 124) with the intention of examining the possible moderating role of ED & EH on the hypothesised relationships linking the dimensions of EO to EG. The results are presented in Table 6.28.

Table 6.27: Regression analysis with moderators for small, medium, and micro enterprises (n = 1,031)

Model No	Associated Hypothesis	Variables				Model Summary							Hypothesis Supported / Not Supported
		Y[a]	X[b]	W[c]	Z[c]	R	R^2	MSE	F	df 1	df 2	*p*-value	
1	$H_{4\&8}$	EG	PA-INNV	EH	ED	0.037	0.001	25,487.68	0.199	7.00	1,023.00	0.986	**Not Supported**
2	H_{12}	EG	RT	EH	ED	0.031	0.001	25,497.40	0.143	7.00	1,023.00	0.995	**Not Supported**
3	H_{16}	EG	CA	EH	ED	0.064	0.004	25,419.20	0.593	7.00	1,023.00	0.762	**Not Supported**
4	H_{20}	EG	AN	EH	ED	0.042	0.002	25,478.23	0.253	7.00	1,023.00	0.971	**Not Supported**

a: Dependent variable
b: Independent variable
c: Moderating variables
Confidence interval: ($p < 0.05$).

Table 6.28: Regression analysis with moderators for medium-sized businesses (n = 124)

Model No.	Associated Hypothesis	Variables				Model Summary							Hypothesis Supported / Not Supported
		Y[a]	X[b]	W[c]	Z[c]	R	R^2	MSE	F	df 1	df 2	*p*-value	
1	$H_{4\&8}$	EG	PA-INNV	EH	ED	0.298	0.089	1,430.86	1.283	92.00	1,023.00	0.268	**Not Supported**
2	H_{12}	EG	RT	EH	ED	0.241	0.058	1,479.56	0.808	92.00	1,023.00	0.583	**Not Supported**
3	H_{16}	EG	CA	EH	ED	0.310	0.096	1,419.93	1.394	92.00	1,023.00	0.217	**Not Supported**
4	H_{20}	EG	AN	EH	ED	0.213	0.046	1,499.11	0.626	92.00	1,023.00	0.733	**Not Supported**

a: Dependent variable
b: Independent variable
c: Moderating variables
Confidence interval: ($p < 0.05$).

In the light of the *p*-values in the range of 0.217 to 0.733 returned by the regression analysis, the four models tested for medium-sized businesses were found to be statistically insignificant. Hence, the findings from this study do not confirm that environmental hostility and environmental dynamism play a moderating role on the relationships between the dimensions of EO and employment growth for medium-sized businesses. In conclusion it is instructive that the model-testing results for medium-sized business align with those for the entire sample of small businesses studied.

6.7 CHAPTER SUMMARY

Chapter 6 has presented the empirical findings of this study. It has focused on providing details of the data collected through the survey of small businesses across South Africa as well as the analysis of the data. This is with the view of addressing the research objectives and testing the *a priori* hypotheses. These findings are organised based on descriptive and inferential statistical techniques. These techniques and methods were discussed in Chapter 5 and they have been useful in analysing and interpreting data.

The chapter presented demographic information of the respondents. This information included how long the businesses has been in operation, the economic sector in which they operate, their geo-political locations, their total annual turnover and total gross asset value. Respondents to this study were mainly from the Gauteng and North-West Provinces of South Africa. The respondents are from predominantly established businesses that have been in operation for at least 3.5 years and consist largely of service sector-based enterprises; the highest proportion of firms in the sample represents the professional and consulting services sector.

In examining the linkages between the environment, dimensions of EO and employment growth, statistical testing that assesses construct validity and reliability of the measurement model was carried out through factor analysis. Exploratory factor analysis (EFA) was used to determine the underlying factor structure of the data, and four factors of EO were statistically visible. This is contrary to theory that EO has five dimensions (factors) as presented in the literature and hypothesised in this study. It was found that the dimensions of innovativeness and pro-activeness

loaded as a single factor for this sample; consequently, the emergence of proactive-innovation as an independent dimension of EO. Confirmatory factor analysis (CFA) was conducted to verify the assumption that a relationship exists between the observed variables and their underlying latent construct(s). Considering results of the CFA analysis by examining the model fit summary, the relationship between environmental hostility, environmental dynamism and the dimensions of entrepreneurial orientation can be confirmed. In addressing the hypothesised relationships between the dimensions of EO and employment growth, results of correlational analysis indicate statistically insignificant relationships between all of the dimensions and employment growth. However, statistically significant relationships were found between the dimensions of proactive-innovation and employment growth as well as competitive aggressiveness and employment growth within the category of medium-sized enterprises (firms with 51 employees and above). Additionally, it illuminates the role of size in a firm's propensity to generate employment. As regards the moderating roles of environmental dynamism and hostility on the relationships between the four dimensions of EO and employment growth, it was found to be insignificant.

These findings provide a basis for drawing conclusions and making recommendations in the next chapter. Hence, Chapter 7 furthers the discussion as guided by the research objectives and the study's hypotheses.

CHAPTER 7
CONCLUSION AND RECOMMENDATIONS

7.1 INTRODUCTION

The previous chapter presented the findings of this study and elaborated on the output of data analysis conducted through different techniques. Hence this chapter seeks to summarise those findings and draw the study to its conclusion. However, it commences with an overview of the literature study as this provides the theoretical framework within which the study lies. It goes further to summarise the descriptive statistical analysis of the sample. This chapter revisits the research objectives and hypotheses as it seeks to clarify the implication of the research findings and clarify the outcomes of the hypothesised relationships. This study examined the relationships between environmental dynamism and hostility, the dimensions of entrepreneurial orientation and employment growth amongst SMMEs in South Africa. As part of this conclusion two theoretical models are presented that illustrate the findings of this study by showing the relationships that have been supported empirically.

In this chapter, the contribution this study has made to the body of knowledge in entrepreneurship and small business management is also presented. This is done from a theoretical, methodological and practical perspective and suggestions are also provided for small business practice and policy formulation based on this study. In spite of the study's contribution it has limitations and these are identified and clarified. As a follow up on these limitations, recommendations are made further work on this subject.

7.2 OVERVIEW OF THE LITERATURE STUDY

The review of relevant literature is a component of this study and it has been covered mainly in Chapters 2, 3 and 4. However, some aspects are contained in Chapter 1. The following paragraphs provide an overview of these chapters.

Chapter 1 introduced and provided a background to the study. It stated the problem highlighting the unemployment challenge that typifies the socio-economic landscape in South-Africa, slow growth and the inability to compete with economies of similar sizes. It laid emphasis on the increasing attention being placed on the business environment and small business sector by government and the private sector through legislation and support programmes. It went further to highlight the role of entrepreneurial firms in sustaining the growth of the economy and the relevance of entrepreneurial orientation in assessing entrepreneurial behaviour and intensity at firm level. The first chapter considered the key terms of the study being entrepreneurial orientation, environmental hostility, environmental dynamism, employment growth as it provides basic understanding of each of these constructs. Through a theoretical framework it established the connection between the constructs as it centred the discussion around the study's objective. In doing this, it describes the link between variables in the task environment and entrepreneurial orientation along with how entrepreneurial orientation connects with firm growth.

Chapter 2 initiated different essential topics within the field of entrepreneurial orientation. It paid attention to the evolution of the construct, its conceptual formation and the emergence of its dimensions. Considered in the second chapter are Khandwalla (1977) and Miller's (1976) investigation of firm archetypes, Miller and Friesen's (1982) interpretation of entrepreneurial and conservative firms and the radical shift towards defining entrepreneurship as a concept that represents new entry by Lumpkin and Dess (1996). It went further to provide an array of definitions to EO and enquired into each of the five dimensions based on the multi-dimensional conceptualisation. As it was deemed necessary to appraise how EO has been considered in previous empirical studies and how a theoretical framework has developed around the construct this chapter connects EO to theory. It reviewed the universalistic, contingency, configurational views and mediation studies that have examined the construct empirically. The discussion on EO was drawn to a close with an analysis of its measurement models; as a formative or reflective model and as a first-order or second-order model.

Chapter 3 expounded on the concept of environment and small businesses. It began by discussing foundational theories pertinent to the firm and the environment. It also

and presented conceptual models describing the environment and entrepreneurial behaviour of firms. It illuminated the role of the task environment from its earliest conception in the strategy literature (Miller & Friesen, 1982; Guth & Ginsberg, 1990) to the latest reviews by entrepreneurship scholars (Kreiser & Davis, 2010; Gupta & Batra, 2016). It argues that a direct relationship exists between environmental dynamism and hostility, and EO as firms often adopt an entrepreneurial posture and competitive orientation in the face of environmental challenges and opportunities. The third chapter goes further to show the need to attend to the moderating role of the environment on the relationship between entrepreneurial orientation and its performance measures such as growth. Hence it draws from theorists, such as Lumpkin and Dess (1996) and Kreiser and Davis (2010), who presented models that examined the two concepts.

The second part of Chapter 3 examined the definition of a small businesses across countries (developed, emerging and developing economies) including South Africa. It sought to clarify the concept of a small business and its use given different socio-economic contexts. In this section it is argued that a cross-country generalisation on the definition of a small business, not considering the unique features peculiar to social economic environment in which they operate, can be erroneous and may not be effective for research and policy making. This discussion was taken further but South Africa became to country of focus. It highlighted the significance of the SMME sector and elaborates on the state of entrepreneurship and that of the business environment in the country. This chapter closes off with a dissection of environmental challenges facing small businesses in South Africa.

Chapter 4 focused on the nexus of the environment, entrepreneurial orientation and employment growth from a theoretical and empirical perspective. In this chapter the environment was presented as an antecedent to entrepreneurial orientation and the latter a possible predictor of employment growth in the context of small businesses. It also considered the moderating roles of two environmental variables – dynamism and hostility – on the relationships between the individual dimensions of EO (namely, innovativeness, pro-activeness, risk-taking, competitive aggressiveness, and autonomy) and employment growth. Within subsections of chapter four the linkages between environmental dynamism, environmental hostility, individual

dimensions of EO and employment growth are presented in further detail. The arguments put forward in each of these subsections led to the formulation of the research hypotheses and essentially the conceptual model for this study.

7.3 OVERVIEW OF DESCRIPTIVE STATISTICS OF SAMPLE

As part of the conclusion it is apt to present a summary of the sample that has been investigated. This will keep in view characteristics peculiar to this sample and how it could apply to the findings of this study from which conclusions are being drawn. Reiterating basic descriptors of the research design, this is a cross-sectional, *ex post facto* and formal study. Moreover, being an empirical study, a survey methodology was employed. In this study was data was collected across the nine provinces of South Africa through a structured questionnaire. However, only 1,031 responding small businesses who showed positive employment growth were considered for analysis. This summary of the sample characteristics is presented primarily through descriptive statistical analysis (using numbers and percentages). It features both personal and business characteristics of respondents. The personal sample characteristics are described according to gender, age, race and highest educational qualification. The business characteristics are described according to economic sector, phase of business operation, geo-political location (based on provinces), total annual turnover and total asset gross value of the business. Table 7.1 presents the sample characteristics and their description.

With regard to the personal characteristics of this sample, respondents were predominantly adult (35 years of age and above) white males who had at least a post high school matriculation or university education. The sample had both service and non-service sector businesses represented fairly. However, professional and consulting services constituted close to a third of the sample. Although the sample consisted of start-ups, a significant proportion of responding firms were established businesses that were drawn largely from Gauteng, North-West and Northern Cape Provinces. The total annual turnover of many of the businesses represented in the sample was less than ZAR 6 000 000 and their total gross asset value less than ZAR 1 000 000 and this could be because the low capital structure of the economic sectors from which they were drawn.

Table 7.1: Sample characteristics and description (n = 1,031)

Sample Characteristic	Description
Gender	There were 687 males (67 %) and 344 females (33 %) in the sample.
Age	This sample consisted of respondents with age ranges: 18 to 34 years 84 (8.15 %) 35 to 44 years 233 (21.63 %) 45 to 54 years 314 (30.45 %) 55 to 64 years 292 (28.32 %), and 65+ years 118 (11.45 %).
Racial Affiliation	Racial affiliation in this sample is categorised into: Blacks 208 (20.2 %) Coloureds 42 (4.1 %) Whites 721 (69.9 %) Indians 37 (3.6 %) ,and Others 23 (2.2 %).
Highest Qualification	The highest qualification of the respondents fell into five groups: High school matriculation 133 (12.9 %) Post matriculation (for example, National Diploma) 407 (39.5 %) Degree or Honours 232 (22.5 %) Masters or Doctoral 231 (22.4 %), and Other qualifications 28 (2.7 %).

Sample Characteristic	Description
Economic Sector	This sample was broadly classified into service sector based (57.4 %) and non-service sector based (42.6 %) businesses, respectively. This sample consisted of 592 service sector-based responding firms across 16 sub-sectors (for example, professional services, consulting services, information technology, hospitality/tourism) and 439 non-service sector-based responding firms across 4 sub-sectors (namely, agriculture, mining, manufacturing and construction).
Phase of Business Operation	As regards the phase of business operation, respondents were classified into start-ups and established businesses. Of the entire sample, 48 (4.7 %) respondents were start-up businesses, and 983 (95.3 %) respondents were established businesses.
Geo-Political Location (by province)	The responding businesses were classified based on geo-political location (by province) across South Africa. By province, the breakdown of respondents by number and percentage was: Gauteng Province 474 (46.0 %) North West Province 223 (21.6 %) Northern Cape Province 135 (13.1 %) Mpumalanga Province 56 (5.4 %) Limpopo Province 49 (4.8 %) Eastern Cape Province 35 (3.4 %) Western Cape Province 26 (2.5 %) Free State Province 21 (2.5 %) and KwaZulu-Natal Province 12 (1.2 %).

Sample Characteristic	Description
Total Annual Turnover	Businesses that responded to this study had total annual turnovers ranging from ≤ ZAR 3 000 000 to ≥ ZAR 26 000 000 and were classified into eight groups: 478 businesses (46.4 %) with ≤ ZAR 3 000 000 159 businesses (15.4 %) with ZAR 3 000 000 to ZAR 6 000 000 101 businesses (9.8 %) with ZAR 6 000 000 to ZAR 10 000 000 49 businesses (4.8 %) with ZAR 10 000 000 to ZAR 14 000 000 31 businesses (3.0 %) with ZAR 14 000 000 to ZAR 18 000 000 24 businesses (2.3 %) with ZAR 18 000 000 to ZAR 22 000 000 26 businesses (2.5 %) with ZAR 22 000 000 to ZAR 26 000 000 and 163 businesses (15.8 %) with ≥ ZAR 26 000 000 as total annual turnover.
Total Gross Asset Value	Businesses that responded to this study had total gross asset values ranging from ≤ ZAR 500 000 to ≥ ZAR5 000 000 and have been classified into eleven groups: 452 businesses (43.8 %) with ≤ ZAR 500 000, 172 businesses (16.7 %) with ZAR 500 000 to ZAR 1 000 000, 75 businesses (7.3 %) with ZAR 1 000 001 to ZAR 1 500 000, 39 businesses (3.8 %) with ZAR 1 500 001 to ZAR 2 000 000, 28 businesses (2.7 %) with ZAR 2 000 001 to ZAR 2 500 000, 37 businesses (3.6 %) with ZAR 2 500 001 to ZAR 3 000 000, 14 businesses (1.4 %) with ZAR 3 000 001 to ZAR 3 500 000, 17 businesses (1.6 %) with ZAR 3 500 001 to ZAR 4 000 000, 8 businesses (0.8 %) with ZAR 4 000 001 to ZAR 4 500 000, 24 businesses (2.3 %) with ZAR 4 500 001 to R5 000 000 and 165 businesses (16 %) with ≥ ZAR 5 000 000 as a total gross asset value.
Source: Author's own compilation.	

7.4 RESEARCH OBJECTIVES AND HYPOTHESES REVISITED

In this study the primary research objective is to examine the nexus of environmental hostility, environmental dynamism, the dimensions of entrepreneurial orientation (EO) and employment growth amongst small businesses in South Africa. However, taking cognisance of the research findings, this study's secondary objectives have been re-assessed. Instructively, the objectives related to pro-activeness and innovativeness have had to be merged in the light of the statistical findings in Section 6.3.1, that revealed that the two EO dimensions loaded as a single construct. Summarily, the objectives are therefore to examine the nexus of:

- environmental hostility, environmental dynamism, small business proactive-innovation and employment growth.
- environmental hostility, environmental dynamism, small business risk-taking and employment growth.
- environmental hostility, environmental dynamism, small business competitive aggressiveness and employment growth.
- environmental hostility, environmental dynamism, small business autonomy and employment growth.

In realising these objectives, the research hypotheses that have been put forward (in Sections 4.4 to 4.8) and restated (in Section 6.3.3) were also revisited. The following sub-sections present these hypotheses in line with (conforming with) the secondary research objectives. The statistical analysis involved testing these hypotheses was described. The results were presented and inferences drawn.

7.4.1 Research Objective and Hypotheses Relating to Proactive-Innovation

A research objective of the study was to examine the nexus of environmental hostility, environmental dynamism, proactive-innovation and employment growth. In this regard the following hypotheses were stated:

$H_{1\&5}$: Environmental dynamism has a positive relationship with small business proactive-innovation.

$H_{2\&6}$: Environmental hostility has a relationship with small business proactive-innovation.

$H_{3\&7}$: Small business proactive-innovation has a positive relationship with employment growth.

$H_{4\&8}$: Environmental dynamism and hostility will moderate the relationship between small business proactive-innovation and employment growth.

With regard to ***$H_{1\&5}$*** and ***$H_{2\&6}$*** the CFA validated the empirical link between environmental dynamism (ED) and proactive-innovation (PA-INNV) as well as and between environmental hostility (EH) and proactive-innovation (PA-INNV) with acceptable model fit indices. Correlation analysis results corroborated these relationships as the correlation coefficient between ED and PA-INNV was found to be 0.232 (at 0.01 level of significance) and that between EH and PA-INNV was found to 0.146 (at 0.01 level of significance). Further confirmation of these relationships was obtained through a SEM model as the relationship between EH and PA-INNV yielded a path coefficient of 0.111, t-statistics of 2.974 and *p*-value of 0.003. For ED and PA-INNV, a path coefficient of 0.234, t-statistic of 7.249 and *p*-value of 0.000 was observed. These findings indicated statistical significance and a positive relationship between EH and PA-INNV as well as ED and PA-INNV. Consequently, the hypotheses linking the environment to pro-activeness and innovativeness (***$H_{1\&5}$*** and ***$H_{2\&6}$***) are supported.

Considering the relationship between proactive-innovation and employment growth the correlation coefficient was found to be statistically insignificant and low (r = 0.018). Therefore, a relationship between proactive-innovation and employment growth was not confirmed and its related hypothesis (***$H_{3\&7}$***) was not supported. This was also the case when the smaller sample of MSB was investigated, given that a negative correlation (r = -0.235), though significant (*p* = 0.018), was found between PA-INNV and EG (see Table 6.26). With respect to the moderating role of the environment on the relationship between proactive-innovation and employment growth, a regression analysis was carried out. In testing the moderating effects of ED and EH on the relationship between PA-INNV and EG, the model (as shown in Table 6.27) was found to be statistically insignificant with a *p*-value of 0.9857, hence ***$H_{4\&8}$*** is not supported.

7.4.2 Research Objective and Hypotheses Relating to Risk-taking

Another research objective sought to examine the nexus of environmental hostility, environmental dynamism, risk-taking and employment growth. Considering this, the following hypotheses were stated:

H_9: Environmental dynamism has a positive relationship with small business risk-taking.

H_{10}: Environmental hostility has a positive relationship with small business risk-taking.

H_{11}: Small business risk-taking has a positive relationship with employment growth

H_{12}: Environmental dynamism and hostility will moderate the relationship between small business risk-taking and employment growth.

As it relates to ***H_9*** and ***H_{10}*** the CFA validated the empirical link between environmental dynamism (ED) and risk-taking (RT) as well as between environmental hostility (EH) and risk-taking (RT) with acceptable model fit indices. The two relationships of interest (ED-RT; EH-RT) were found to be statistically significant given the respective associated correlation coefficients of 0.225 and 0.232 obtained at a 0.000 level of significance (see Table 6.20). Furthermore, confirmation obtained through results of SEM shows that the relationship between EH and RT yielded a path coefficient of 0.193, and t-statistic of 5.715 at a *p*-value of 0.000 (see Table 6.24). For ED and RT, a path co-efficient of 0.203 and t-statistic of 6.273 was found with a *p*-value of 0.000. These findings indicated statistical significance and a positive relationship between EH and RT as well as ED and RT. Hence the hypotheses linking the environment to risk-taking (***H_9*** & ***H_{10}***) are supported.

However, the relationship between risk-taking and employment growth was found to be statistically insignificant ($p = 0.851$) and the associated correlation coefficient very low ($r = 0.006$). Consequently, a relationship between risk-taking and employment growth was not confirmed given that its related hypothesis (***H_{11}***) was not supported. Further analysis of the moderating role of the environment on the

relationship between risk-taking and employment growth was done through regression analysis. The model considered was found to be statistically insignificant with a *p*-value of 0.9948. Hence H_{12} is not supported.

7.4.3 Research Objective and Hypotheses Relating to Competitive Aggressiveness

One of the objectives of the study was to examine the nexus of environmental hostility, environmental dynamism, competitive aggressiveness and employment growth. For this reason, the following hypotheses were stated:

H_{13}: Environmental dynamism has a positive relationship with small business competitive aggressiveness.

H_{14}: Environmental hostility has a positive relationship with small business competitive aggressiveness.

H_{15}: Small business competitive aggressiveness has a negative relationship with employment growth

H_{16}: Environmental dynamism and hostility will moderate the relationship between small business competitive aggressiveness and employment growth.

The CFA focused on H_{13} and H_{14} validated the empirical link between environmental dynamism (ED) and competitive aggressiveness (CA), along with environmental hostility (EH) and competitive aggressiveness (CA) with acceptable model fit indices. Correlation analysis results corroborated these relationships as the correlation coefficient between ED and CA and that between and that EH and CA was found to be 0.133 and 0.326, respectively (at a 0.01 level of significance). Furthermore, assessment of the link between the environmental variables and competitive aggressiveness was obtained from the SEM model as the relationship between EH and CA yielded a path co-efficient of 0.350, a t-statistic of 11.390 and a *p*-value of 0.000. For the relationship between ED and CA the path co-efficient was 0.101, t-statistic 3.225 and *p*-value of 0.001. These findings indicated statistical significance and a positive relationship between EH and CA as well as ED and CA. Hence the hypotheses linking the environment to competitive aggressiveness (H_{13} & H_{14}) are supported.

The correlation coefficient of 0.032 and *p*-value of 0.305 indicate that the relationship between CA and EG is statistically insignificant and so the related hypothesis ***H_{15}*** was not supported. Notably in the sample comprising only medium-sized businesses, a negative and statistically significant correlation was observed between CA and EG, with a correlation coefficient of -0.229 and a *p*-value of 0.022 (see Table 6.26). Hence, the hypothesis (***H_{15}***) was supported for this subset of the entire sample. In response to the moderating role of environment on the relationship between competitive aggressiveness and employment growth, analysis was carried out accordingly using regression. In testing the moderating effects of ED and EH on the relationship between CA and EG, the model (as shown in Table 6.27) was found to be statistically insignificant with a *p*-value of 0.7618, hence ***H_{16}***. was not supported.

7.4.4 Research Objective and Hypotheses Relating to Autonomy

The last research objective sought to examine the nexus of environmental hostility, environmental dynamism, autonomy and employment growth. Taking this into account the following hypotheses were stated:

> ***H_{17}: Environmental dynamism has a positive relationship with small business autonomy.***
>
> ***H_{18}: Environmental hostility has a positive relationship with small business autonomy.***
>
> ***H_{19}: Small business autonomy has a positive relationship with employment growth.***
>
> ***H_{20}: Environmental dynamism and hostility will moderate the relationship between small business autonomy and employment growth.***

Similar to results obtained for other EO dimensions, acceptable model fit indices were obtained from the CFA of the each of the two dimensions of the environment (ED and EH) and autonomy (AN). Correlation analysis results corroborated these relationships as the correlation coefficient between ED and AN was found to be 0.128 and between EH and AN it was found to 0.142 (both at 0.000 level of significance) (see Table 6.20). Further confirmation of these relationships was

obtained through an SEM model as the relationship between EH and AN yielded a path coefficient of 0.127, t-statistic of 3.491 and *p*-value of 0.000. For ED and AN, a path coefficient of 0.095, t-statistic of 2.832 and *p*-value of 0.005 was observed. These findings indicated statistical significance and a positive relationship between EH and AN as well as ED and AN. Consequently, the hypotheses linking the environment to autonomy (***H_{17}*** & ***H_{18}***) are supported.

Considering the relationship between autonomy and employment growth, the correlation coefficient was found to be statistically insignificant and low (r = 0.019; *p*-value = 0.544) (See Table 6.25). Therefore, a relationship between autonomy and employment growth was not confirmed since its related hypothesis (***H_{19}***) was not supported. Further analysis was carried out using regression to examine the moderating role of the environment on the relationship between autonomy and employment growth. In testing the moderating effects of ED and EH on the relationship between AN and EG, the model (as shown in Table 6.27) was found to be statistically insignificant with a *p*-value of 0.971, hence ***H_{20}*** was not supported.

Table 7.2 summarises the research objectives, hypotheses and the statistical inferences drawn from each of the relationships. It clarifies the connection between the study's objectives, hypotheses and its outcomes. It can be seen from Table 7.2 that the hypotheses stating the relationships between environmental dynamism and hostility and each of the dimension of EO were all supported. The relationships hypothesised between ED and PA-INNV, RT, CA and AN were statistically significant in the positive direction along with the relationships between EH and PA-INNV, RT, CA and AN. Consequently, increased environmental dynamism and hostility are linked to higher display of firm-level entrepreneurial orientation.

Table 7.2: Presentation of research objectives, hypotheses and statistical inference

Secondary Research Objectives	Research Hypotheses	Statistical Inference
1: To examine the nexus of environmental hostility, environmental dynamism, small business **proactive-innovation** and employment growth.	***$H_{1\&5}$:*** *Environmental dynamism has a positive relationship with small business proactive-innovation.*	Hypothesis is **supported** as a statistically significant relationship was found.
	$H_{2\&6}$: *Environmental hostility has a relationship with small business proactive-innovation.*	Hypothesis is **supported** as a statistically significant relationship was found.
	$H_{3\&7}$: *Small business proactive-innovation has a positive relationship with employment growth.*	Hypothesis is **not supported** as a statistically significant positive relationship[1] was not found.
	$H_{4\&8}$: *Environmental dynamism and hostility will moderate the relationship between small business proactive-innovation and employment growth.*	Hypothesis is **not supported** as a statistically significant relationship was not found.

[1] Notably, a statistically significant negative relationship was found for ***$H_{3\&7}$*** within medium-sized businesses only.

Secondary Research Objectives	Research Hypotheses	Statistical Inference
2: To examine the nexus of environmental hostility, environmental dynamism, small business **risk-taking** and employment growth.	***H_9:*** *Environmental dynamism has positive relationship with small business risk-taking.*	Hypothesis is **supported** as a statistically significant positive relationship was found.
	H_{10}: *Environmental hostility has a positive relationship with small business risk-taking.*	Hypothesis is **supported** as a statistically significant positive relationship was found.
	H_{11}: *Small business risk-taking has a positive relationship with employment growth.*	Hypothesis is **not supported** as a statistically significant positive relationship was not found.
	H_{12}: *Environmental dynamism and hostility will moderate the relationship between small business risk-taking and employment growth.*	Hypothesis is **not supported** as a statistically significant relationship was not found.

Secondary Research Objectives	Research Hypotheses	Statistical Inference
3: To examine the nexus of environmental hostility, environmental dynamism, small business **competitive aggressiveness** and employment growth.	***H_{13}:*** *Environmental dynamism has a positive relationship with small business competitive aggressiveness.*	Hypothesis is **supported** as a statistically significant positive relationship was found.
	H_{14}: *Environmental hostility has a positive relationship with small business competitive aggressiveness.*	Hypothesis is **supported** as a statistically significant relationships was found.
	H_{15}: *Small business competitive aggressiveness has a negative relationship with employment growth.*	Hypothesis is **not supported**[2] as a statistically significant negative relationship was not found.
	H_{16}: *Environmental dynamism and hostility will moderate the relationship between small business competitive aggressiveness and employment growth.*	Hypothesis is **not supported** as a statistically significant relationship was not found.

[2] As indicated above, H_{15} was not found to be supported in the entire sample of SMMEs but the reverse was the case within the specific sub-sample of medium-sized businesses.

Secondary Research Objectives	Research Hypotheses	Statistical Inference
4: To examine the nexus of environmental hostility, environmental dynamism, small business **autonomy** and employment growth.	***H_{17}:*** *Environmental dynamism has a positive relationship with small business autonomy.*	Hypothesis is **supported** as a statistically significant positive relationship was found
	H_{18}: *Environmental hostility has a positive relationship with small business autonomy.*	Hypothesis is **supported** as a statistically significant positive relationship was found
	H_{19}: *Small business autonomy has a positive relationship with employment growth.*	Hypothesis is **not supported** as statistically significant relationship was not found
	H_{20}: *Environmental dynamism and hostility will moderate the relationship between small business autonomy and employment growth.*	Hypothesis is **not supported** as a statistically significant relationship was not found
Source: Author's own compilation.		

The findings of this study and the inferences being drawn therefrom are consistent with the stance of earlier entrepreneurship theorists, who stated that the more dynamic and hostile the environment is, the more firms that operate within such environments will be entrepreneurial. For instance, Miller (1983:775) posited that environmental dynamism and hostility will engender pro-active and innovative behaviour and firms will tailor their actions to the environment and gear entrepreneurial efforts toward the demand of their markets. Furthermore, in presenting entrepreneurship as a firm level behaviour, Covin and Slevin's (1991) model indicates a strong association between external variables (specifically environmental dynamism and hostility) and entrepreneurial posture. They argue in support of the inseparability of the external environment from the entrepreneurial process and assert that the external environment has a strong if not deterministic influence on the existence and effectiveness of entrepreneurial activity. Hence, they proposed that entrepreneurial posture is positively related to both environmental dynamism and hostility (Covin & Slevin, 1991:12) which was found to be credible in this study.

The findings in this study are consistent with prior studies that have considered the environment and the individual dimensions of EO. This is the case with the empirical study of Baron and Tang (2011), which confirms firm level innovation as being stronger in dynamic environments than stable environments. Creativity is often considered as a raw material for innovation. In order for new ideas that are generated by creative thinking to be transformed into product or service innovation, firms must be motivated. Firms must be motivated to the extent that they will consider these creative ideas carefully and implement the ones that are most beneficial. According to Baron and Tang (2011:52), this motivation is often provided by a dynamic environment. In a dynamic environment which is very often competitive, firms have to be pro-active in their innovative practices, as they create and take opportunities. This combination of innovative and pro-active entrepreneurial actions is maintained largely by a motivating environment that is dynamic in nature. Yu, Kwon, Lee and Jung (2016) also corroborate the viewpoint that pro-activeness as an entrepreneurial strategy is often displayed in a dynamic environment. Further, that pro-activeness intensifies with increased environmental dynamism.

With regard to the relationship between environmental dynamism and risk-taking, the finding of this study is consistent with the configurational matrix of entrepreneurial orientation, structure and environment presented by Kreiser and Davis (2010:46). This matrix demonstrates moderate to high risk-taking in a dynamic environment while the best that can be expected from a stable environment is moderate level risk-taking. This speaks to the positive relationship between risk-taking and environmental dynamism as found in this study.

Nonetheless some researchers found that a dynamic environment does not prompt firm level entrepreneurial orientation. Frank, Kesseler and Fink (2010) examined the interaction between environmental dynamism and entrepreneurial orientation and found the relationship between them to be statistically insignificant. Consequently, their hypothesis that environmental dynamism moderates the relationship between EO and business performance was rejected. In spite of that, they found a negative correlation between firm age and ED along with firm age and EO. This could possibly imply that newer firms consider their environment more dynamic than older firms do and that these firms tend to display a higher EO. In addition, the industry environment and its life-cycle stage must be taken into account when considering the relationship between environmental dynamism and EO (Frank *et al.,* 2010:192).

Likewise, environmental hostility has been found to associate positively with EO. Studies (Casillas *et al.,* 2010, McGee *et al.,* 2012; Martin & Rialp, 2013) have shown that entrepreneurial firms perform better in a hostile environment than less entrepreneurial (or non-entrepreneurial) firms. Moreno and Casillas (2008) found that in a more hostile environment, strategies of expansion through new products and markets give rise to higher growth rates. In the context of family firms Lumpkin *et al.* (2001) found that firm growth was positively and statistically related to innovativeness, risk-taking and pro-activeness as well as hostility, an environmental condition which implicitly afforded such entrepreneurial actions. Moreover, Covin and Covin (1990) observed that high-performing firms often exhibit a competitively aggressive orientation to environmental hostility. Lumpkin and Dess' (2001) study show that in hostile environment, where competition is intense and resources are constrained, firms become more competitively aggressive as they develop a higher propensity to directly and intensely challenge their competitors.

These studies attest to the positive relationships between environmental hostility and the dimensions of EO as observed in this study. It becomes plausible that environmental hostility also fosters different entrepreneurial actions as expressed by the individual dimensions of EO.

Notably, all dimensions of EO in this study show a positive relationship with ED and EH. This may be a confirmation of the relatedness of the dimensions of EO irrespective of their distinctive characteristics. However, Rosenbusch *et al.* (2013) show a negative and statistically insignificant relationship between hostility and EO in contrast to other environmental variables (such as dynamism and complexity) where the relationship was positive. In justifying this lack of relationship, Rosenbusch *et al.* (2013:649), argue that not all firms align themselves with a hostile environment and the different forms of hostility (price hostility and non-price hostility) exhibited in the environment.

As shown in the review of literature (in this study), the small business environment in South Africa is one which is intensely competitive, where opportunities and resources are limited. Therefore, firms that are entrepreneurial who perceive this hostility quicker than conservative firms, and are pro-active in seeking out the limited market opportunities available ahead of competitors, retain the market share and possibly record growth. In addition, such a hostile environment may not be conducive for risk averse behaviour, more importantly, if firms expect to stay competitive. Hence, the businesses that responded to this study may taken some form of risk. Essentially, the perception of hostility within the environment has probably driven these businesses to adopt relevant dimensions of EO (pro-active innovation and competitive aggressiveness) to suit the environment and market demands.

Given the context in which this phenomenon has been studied, the environment is supposedly a motivating factor for entrepreneurial action amongst SMMEs in South Africa. Since the respondents to the study are largely with post-matriculation qualifications, they are well-educated small business owners who are aware of their industry environment and have some understanding of firm level entrepreneurial behaviour, these two concepts can be easily grasped and well related. In addition, entrepreneurial actions such as innovation and autonomy will probably be

influenced by this high level of education and the knowledge at the disposal of these respondents.

Furthermore, a sizeable portion of the sample in this study consists of professional and consulting services, who by the very nature of their training require a proper understanding of the industry environment. These businesses are expected to know what opportunities exist within the industry and how to exploit them. It is based on the understanding of the environment that these businesses develop specific entrepreneurial strategies and take actions accordingly.

7.5 THEORETICAL MODELS FOR ENVIRONMENT, ENTREPRENEURIAL ORIENTATION AND EMPLOYMENT GROWTH

Theoretical models are presented in this section to illustrate the nexus of environment, entrepreneurial orientation dimensions and employment growth. Although a conceptual model (Figure 4.1) of the study had been presented, in view of the statistical inferences drawn from the study, changes have been made to reflect its findings. Hence the final theoretical models reveal whether support was found or not for the hypothesised relationships. Moreover, considering the variation in findings between the entire SMME cohort and medium-sized businesses two final models are presented in Figures 7.1 and 7.2.

Figure 7.1 presents the final theoretical model for the studied small businesses. It is representative of the entire sample of 1,031 businesses. In this model the relationship between the environment and entrepreneurial orientation dimensions is depicted. Environmental hostility and environmental dynamism are shown as the predictor variables and the four dimensions of EO (proactive-innovation, risk-taking,

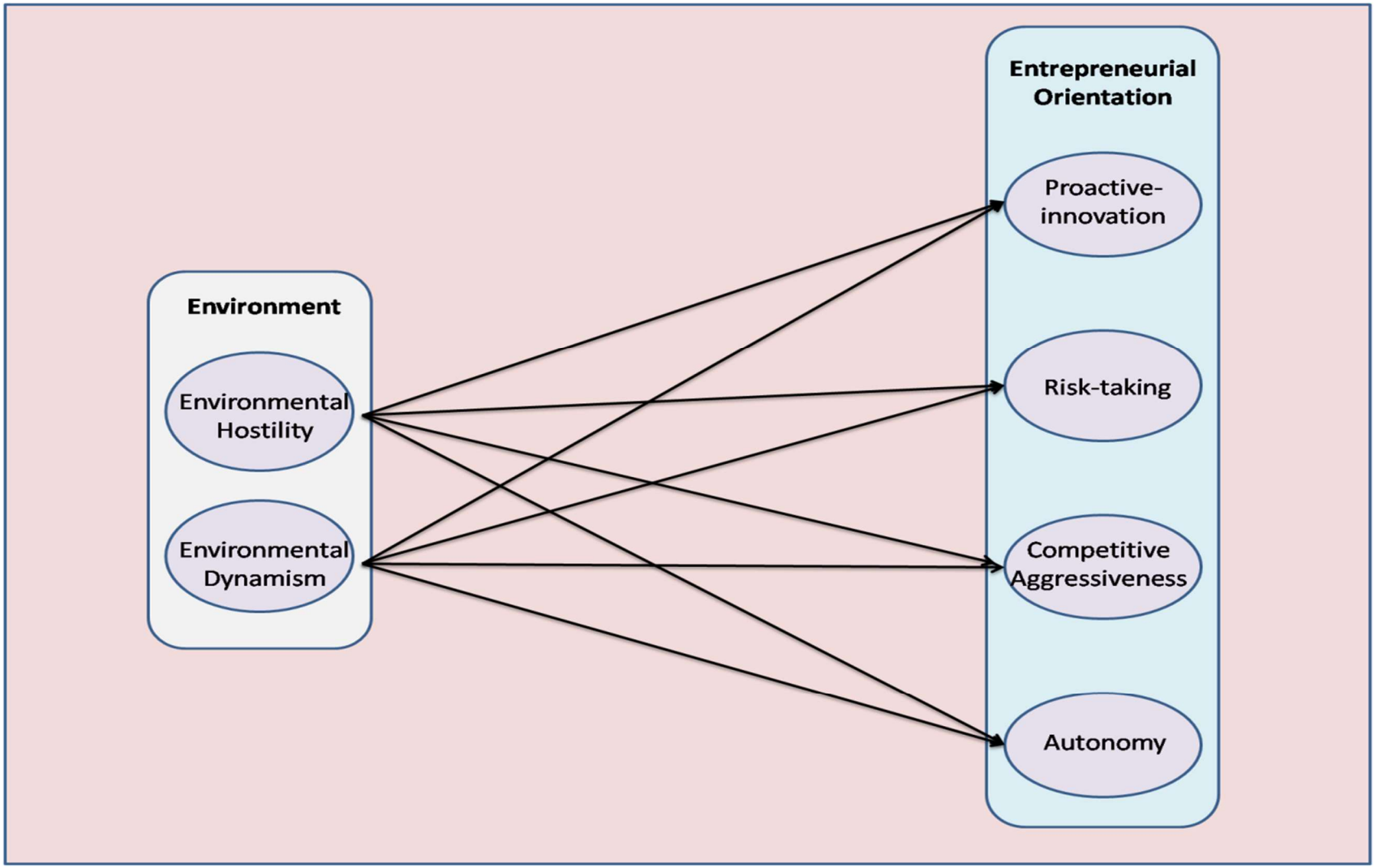

Figure 7.1: Theoretical model for the nexus between environment and entrepreneurial orientation for SMMEs

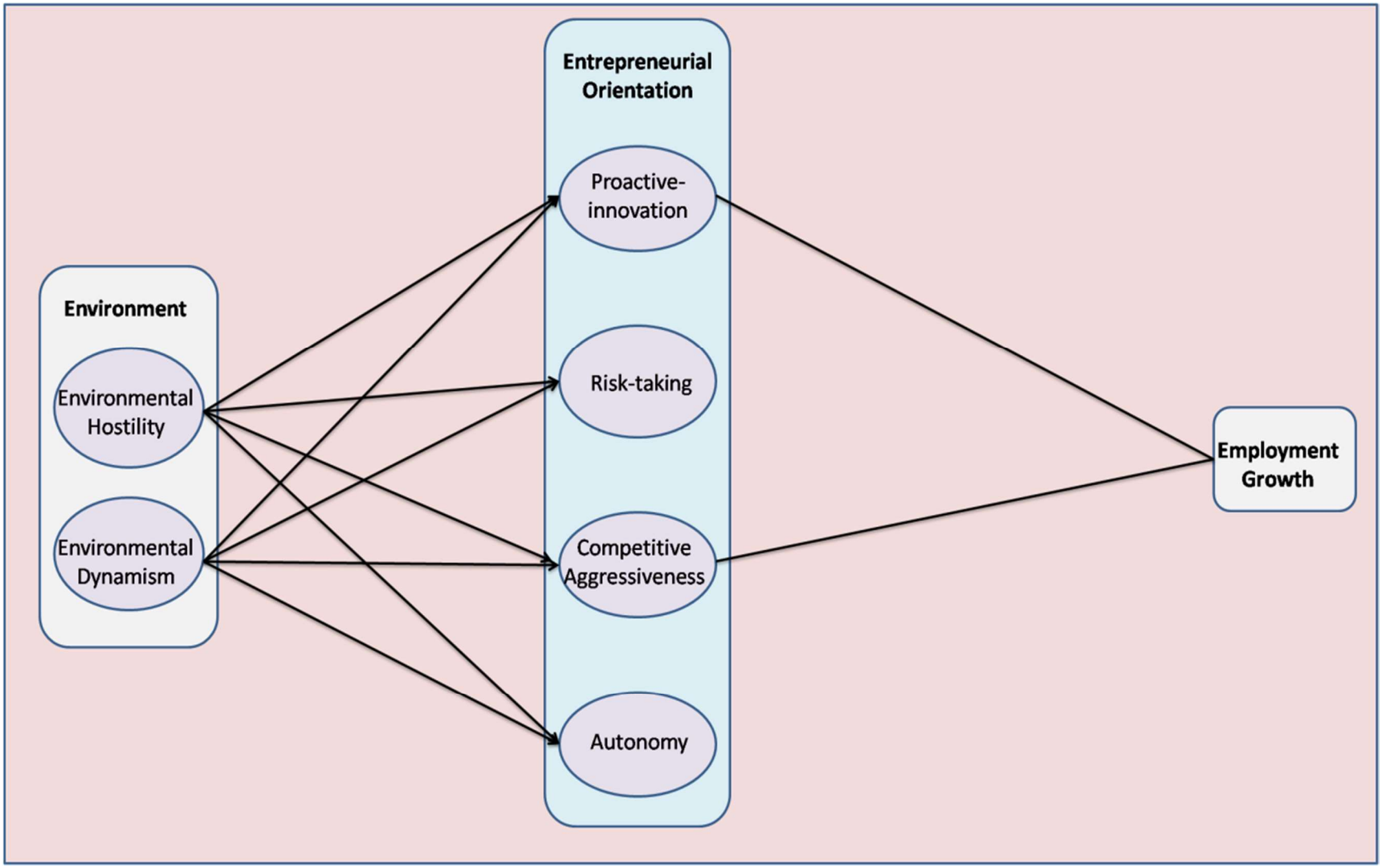

Figure 7.2: Theoretical model for the nexus of environment, entrepreneurial orientation and employment growth for MSBs

competitive aggressiveness and autonomy) as the outcome variables. Since for this entire sample, statistical results do not support the relationships between any of the dimensions of EO and employment growth, these relationships do not feature in the model. Notably, the moderating effect of environmental hostility and dynamism on the relationships between EO dimensions and EG is inapplicable to this model for the same reason (lack of support for related hypotheses).

Figure 7.2 presents another theoretical model for the study's cohort of medium-sized businesses (MSBs). It is representative of a subset of the entire sample of the studied small businesses and consists of 124 businesses. In the second model the relationships between the environment, entrepreneurial orientation dimensions and employment growth are illustrated. Environmental dynamism and hostility are shown as the predictor variables and the four dimensions of EO are presented as outcome variables. It is noteworthy that two of the dimensions of EO, being proactive-innovation and competitive aggressiveness, are shown to be associated with employment growth.

The models clearly draw attention to the role of the environment on the different forms of entrepreneurial expression. Since a relationship can be confirmed between them, the environment could be an enabler or constitute a constraint to diverse expressions of entrepreneurial behaviour or action. Whether it be innovativeness, pro-activeness, risk-taking, competitive aggressive or autonomy, the environmental conditions within which the firm operates plays a crucial role.

Both theoretical models presented in this study find an ally in Urban (2010) who investigated the association between technology orientation, entrepreneurial orientation, environmental dynamism and environmental hostility in South Africa and found a significant correlation between EO, environmental hostility and dynamism. In a sense, this underpins the argument made by Rosenbusch *et al.* (2013) that firms tend to adjust their entrepreneurial orientation in response to the external environment and often use it as a mechanism to tap into the advantages provided by the environment for improved performance. It is therefore unsurprising that both theoretical models presented in this study (for SMMEs and MSBs) reflect the association between the environmental aspects of dynamism and hostility and all the entrepreneurial dimensions. In effect, a small business' entrepreneurial

disposition (regardless of business size) ought to be informed by the exigencies of the environment in which they operate, if they are to prove efficacious for purposes of enhanced business performance.

Beyond the investigation of the relationship between the environment and EO dimensions, the study was also interested in the relationship, if any, between the EO dimensions and EG. While it would seem obvious that the EO inclinations should lend themselves to business performance, the much-touted ability of small businesses to generate employment (see Neneh, 2014; Page & Söderbom, 2015; Lekhanya, 2015) kindled the interest of the study in the possible relationship between EO and EG. Interestingly, when the entire sample of SMMEs was considered, none of the EO dimensions showed any significant correlation with EG.

This outcome is in harmony with the position of Altinay, Madangolu, De Vita, Arasli and Ekinci (2016) whose study of service and retail SMEs in Cyprus revealed that no statistically significant relationship exists between the dimensions of innovativeness, pro-activeness and risk-taking with the dependent variable of employment growth. It is worthy to highlight the similarity between the study population of the Cyprus study and that of this study, given that the respondents of the current study were also predominantly from the service sector (particularly consulting and professional services). Indeed, going by the findings of the Cyprus study and the current one, it would seem possible that entrepreneurial intensity sprouting from the EO dimensions may be associated with other forms of growth in an SMME, besides that related to employment. This could be the case as the firm level entrepreneurial orientation may not necessarily be driven by the specific prospect of employment growth because the SMME and its management may be more pre-occupied with issues of performance linked to business profitability and sustainability.

Beyond the variables and linkages depicted in the theoretical model for all SMMEs in this study, the second theoretical model (Figure 7.2) which applies to MSBs shows that two EO dimensions of proactive-innovation and competitive aggressiveness reflect a statistically significant association with employment growth. Interestingly, this position is in contrast with the stance of Altinay *et al.*

(2016), possibly because these did not investigate the existence (or otherwise) of the relationship of interest within specific cohorts of the SMME population.

It is noteworthy to highlight that this study's finding of the existence of significant relationships between two EO dimensions (proactive-innovation and competitive aggressiveness) and employment growth (PA-INNV and EG; CA and EG) is in alignment with the results obtained in Neneh and van Zyl's (2017) study of MSBs in South Africa which showed a statistically significant relationship between EO and employment growth. Similarly, Kirchoff, Newbert, Hassan and Armington (2007) who examined the influence of innovativeness on employment growth also found that the relationship between the variables was significant. The import of these findings is that the dependent variable of EG in SMMEs may be subject to size-dependent idiosyncrasies. In essence, a blanket model that attempts to link EO dimensions to EG, given its insensitivity to the size of the businesses may not suffice. This is likely to be the case as the extent of the quest for employment growth may differ between micro, small and medium-sized businesses.

As found in this study, the relationship observed between the EO dimensions of PA-INNV, CA and the outcome variable of EG in MSBs is, however, negative. This position contradicts the findings of Karmendi's (2016) study of small and medium enterprises in Nairobi, Kenya that presented a regression model which depicted a positive relationship between innovativeness, pro-activeness, risk-taking and the dependent variable of employment growth. Indeed, Karmendi's (2016) study contends that risk-taking and pro-activeness play the most significant roles in the growth of employment. To some extent the contrast in findings between the current study and that of Karmendi (2016) amplifies the importance of context in EO studies.

While rational thinking may suggest that small businesses that are pro-actively innovative and are not risk averse could record employment growth, this may not always be the case. As shown in this study, an orientation towards proactive-innovation and competitive aggressiveness may result in negative employment growth due to the fact that it is not the primary motivation for such entrepreneurial actions. SMMEs may become pro-active, innovative and competitively aggressive to enhance business performance. The business performance is not un-associated with improved efficiency levels. Indeed, higher levels of efficiency are often attained

by reducing the extent to which resources are utilised for the achievement of set goals.

In the case of a medium-sized business, this may entail utilising the same employee complement to achieve higher goals that reflect increased performance. In this way, it becomes plausible to appreciate that an increase of entrepreneurial intensity along the dimensions of PA-INNV, CA could relate to reduced employment rather than EG. More, increased innovation on the part of MSBs may be driven by the desire to boost performance by automating processes and reducing human interference which in-turn may lead to a reduction rather than an increase in employee numbers.

Furthermore, the fact that a large proportion of the population of MSBs that participated in the current study offer consulting and professional services is instructive. The core of such businesses is the expert knowledge deployed to service clients. In essence, knowledge power rather than employee numbers is a critical variable of success. Given that operations in such sectors, are not particularly labour-intensive, better business performance engineered by a business' entrepreneurial intensity would not necessarily reflect as increased employee numbers but possibly as increased revenues, profits, market share or assets.

Notably, medium-sized businesses have the highest number of employees across the SMME cohort in this study. This ranges from 51 to 200 employees. Given that these businesses are already at their zenith of employee numbers within the SMME group, it is arguable that such firms would still be driven to increase employee numbers, relative to those in the micro and small business category. Having already achieved substantially impressive employee numbers, entrepreneurial dispositions are likely to be driven by other motives, principally an enhancement of the effectiveness and efficiency of the business. MSBs are more likely to be well established business with appreciable degrees of experience and expertise in navigating the business growth terrain. The profound levels of experience and expertise could mean that management of such enterprises recognise that improved business performance is not necessarily collateral with increased employee numbers and therefore the investment in the EO dimensions of PA-INNV and CA may not be geared towards EG.

Extant studies (Coad, Segarra, Teruel, 2013; Rauch *et al.,* 2009; Haltiwanger, Jamin & Miranda, 2013) have shown that age plays an important role in the growth of a firm. For example, Coad *et al.* (2013) showed that although firm growth generally increases with time, employment growth as an outcome tends to significantly vary with age of a firm. This view is supported by Haltiwanger *et al.* (2013) as the evidence presented suggests that younger firms tend to have a greater net effect on employment growth than their older equivalents, even though older firms might be larger in size. Essentially, the age of the firm was not the focus in this study and younger firms were inadequately represented. In this study, medium-sized businesses constitute only 12 % of the sample. The sample in this study is therefore more representative of older firms than younger ones. Hence characteristics of MSBs were clearly not visible in the entire sample but was accentuated when considered exclusively. This is supposedly why the association between proactive-innovation along with competitive aggressiveness and employment growth featured only amongst medium-sized businesses. Haltiwanger *et al.'s* (2013) stance that employment growth is more evident amongst younger firms may be tenable because the age of the firm is considered relevant to the relationship between the entrepreneurial behaviour (or action) and employment growth.

Furthermore, Coad *et al.* (2013) observed that despite the fact that older firms were more effective in transforming sales into other growth outcomes their sales generally declined with age. As a result of this, other growth outcomes such as employment is negatively affected. This lends credence to the negative association between proactive-innovation and competitive aggressiveness and employment growth as found in this study.

7.6 CONTRIBUTION OF THE STUDY

This research contributes to the field of entrepreneurship, strategy and small business management theoretically, empirically and practically.

7.6.1 Theoretical Contribution

Contextualisation is considered as one of leading forces of advancing the field of entrepreneurship (Zahra, Wright & Abdelgawad, 2014:479). Since management

theories could be influenced by geo-political and cultural boundaries a study that considers the South African context can be considered germane. Fundamentally, this contextual study examined small businesses in South Africa with regard to their entrepreneurial orientation, the environment and employment growth.

In this study entrepreneurial orientation and employment growth in businesses within South Africa's small business sector are assessed through a review of relevant literature and an empirical study. Accordingly, this enhances the understanding of how the business environment can influence entrepreneurial action and intensity amongst small firms in the country. In addition, since small businesses in South Africa are classified into different categories, this study shows that the size of firm may play a crucial role in their propensity of employment generation.

This study has responded to the call to move research on EO from its performance outcomes to its antecedents (Miller, 2011:880); in this study task environment variables (dynamism and hostility) have been considered as precursors of EO. This has enhanced the understanding of the environment-EO-employment growth relationship. It makes a distinct theoretical contribution as it considers the environment as an antecedent to EO and employment growth as a consequence of EO. This has been drawn largely from Covin and Slevin's (1991) conceptual model of entrepreneurship as a firm behaviour.

Research on the individual dimensions EO is at its infancy, particularly in South Africa. In response to Miller's (2011:880) call to take the individual components of EO seriously, this study contributes to research focusing on the individual effects of each of its dimensions. Considering the distinct dimensions of EO provides clarity on which of its components relates to the environmental dimensions of ED and EH as well as employment growth of small businesses in South Africa. Moreover, it has responded to the need for studies to consider other variables that could depend on EO besides business performance as it examined employment growth.

The EO theory has been regarded as a stream of the resource-based view (RBV) (Barney, 1991; Grant, 1991) or from the dynamic capability perspective (Teece, 2007, Teece *et al.,* 1997). EO is considered an important resource or capability that

facilitates attaining superior performance (Shirokova *et al.,* 2016:704). Thus, the variables that can affect the EO-performance relationship have been tested as well as the different contexts in which it might occur (Rauch *et al.,* 2009). By establishing a relationship between dynamism and hostility in the business environment and the dimensions of EO, this study has further shown that both are indeed resources that can enhance firm performance.

This study depicts EO as an internal resource in the form of strategic posture or management philosophy and the environment as an external resource that could possibly influence employment growth. Bamiatzi and Kirchmaier (2014) reiterates that the relationship between firm strategy and growth can be properly identified only in context. Hence, this study contextualises the relationship between the environment, EO and employment growth with regard to SMMEs in South Africa. In this regard, it augments the RBV given the context from which this study has been undertaken.

7.6.2 Methodological Contribution

A meta-analysis by Levie and Autio (2013) showed that business growth has been widely measured using asset growth, sales growth and employment growth. Since this study is exclusively directed toward employment growth, it has gone further than previous EO studies (see Moreno & Casillas, 2008; Wiklund, Patzelt & Shepherd, 2009; Casillas, Moreno & Babero, 2010) that have aggregated indicators of growth. Employing Gibrat's Law in measuring employment growth, the study has considered the number of employees at the start-up and at transition into established businesses as well as the period through which employment growth has taken place; thus, it caters for the high sensitivity and bias towards small firms, found in measuring growth through the relative variation index (as done in Gurbuz & Ayokol, 2009; Janssen, 2006, 2009). Moreover, it did not consider growth as a quantum leap as the period over which it occurred was taken into account. Distinctively, it considers an objective measure to SMME growth and not a perceptual measure which is subjective in nature.

Additionally, this study, considered established enterprises that have recorded positive employment growth and have been in operation for at least 42 months.

Hence, homogeneity of the sample is improved, and this enhances the results of data analysis. Lastly, using structural equation modelling (SEM) to show the relationships between environmental dynamism, environmental hostility, the dimensions of entrepreneurial orientation and employment growth allows for comparison with alternative models that have utilised other statistical techniques.

7.6.3 Practical Contribution

Across the spheres of economy and society which includes government and academia, increasing emphasis is being laid on the need for an enabling environment that would facilitate the growth of small businesses (Tustin, 2015; SEDA, 2016; DSBD 2016). Hence this study illuminates further in this respect. Through a review of relevant literature and empirical research it shows that the environment can be associated with entrepreneurial behaviour among SMMEs. It confirms that the uncertainty or predictability of actions of competitors and customers and the intensity of competition and the availability of market and investment opportunities play a role in the entrepreneurial actions and the intensity to which they are carried out (see Miller & Fresen, 1983:222; Covin & Slevin, 1989:75; Adomako, Narteh, Danquah & Analoui, 2016:616; Shirokova *et al.,* 2016:703). Intensive entrepreneurial activity in which firms stay competitive is generally believed to facilitate growth in the economy.

Since small businesses are diverse in nature with different modes of operation and phases of development, it can be drawn from this study that a one size fits all strategy to developing the small business sector is limiting given that the intensity of entrepreneurial orientation varies to different extent across the SMME cohort. It becomes apparent that a unique understanding of the peculiarities across the categories of the SMME cohort is necessary for effective entrepreneurship and small business development in South Africa. Such strategies will probably require consideration of environmental factors, relevant entrepreneurial action, nature of the business and the context in which it operates.

Basically, this study has contributed to the ongoing debate on small business development in South Africa. It pays attention to the issue of job creation amongst SMMEs and relates it to entrepreneurial intensity as it considers the business

environment. This empirical enquiry may be a basis for policy formulation on small businesses in South Africa.

7.6.4 Implication of Findings for Small Business Policy and Practice

A study on the business environment, entrepreneurship and employment growth would be incomplete without providing some guidance that could inform policy and enhance small business practice. Hence the following suggestions are made as regards small businesses and their development.

- Based on the multidimensional perspective EO consist of a set of distinct but related behaviours. Therefore, small firms must adopt EO selectively and leverage on unique entrepreneurial practices and adopt management philosophies that are most consistent with their environment, growth intentions and growth strategies.

- With regard to exhibiting EO among small firms, innovativeness and pro-activeness go hand in hand and is a primary feature of entrepreneurial behaviour (Anderson *et al.,* 2015:1583). As small enterprises seek to develop new products, better business models and processes they must act in anticipation of future demand from prospective customers and seek to take market opportunities ahead of their competitors.

- Since it is apparent that the environment bears an association with entrepreneurial actions, the creation of an enabling environment that would allow for small business to thrive must remain the focus of government and policy makers in South Africa. Such an environment must encourage creativity and innovation, generate more market opportunities that will ensure local and regional competitiveness.

- Although small and very small businesses remain a preferable alternative to unemployment and are mechanisms in alleviate poverty and shortage in employment (Neiman et al., 2014), medium-sized businesses are often better established. They are opportunity driven and they cut across a wider range of economic sectors. They have higher survival rates, are seemingly more sustainable and have a higher propensity for employment growth compared to small and very small businesses. Hence increasing attention should be paid to medium-sized businesses in this respect.

7.7 LIMITATIONS OF THE STUDY

Although this study was conducted with due consideration to optimal research design and methodologies in addressing the research objectives the following limitations were encountered.

Field of Study: The inadequacy of studies on employment growth amongst small business in South Africa was limiting in the review of literature and postulating of hypotheses. However, international studies were considered as points of references as well as small business performance in general.

Geographical Area: Although this study's target population is the nine provinces across South Africa, a large proportion of the sample was drawn from three provinces (Gauteng Province, North-West Province and Northern Cape Province). Of these three provinces, majority of the responses were based in Gauteng which means that the province is over-represented in the sample. However, this is defensible giving that majority of South Africa's businesses are located within Gauteng Province (SEDA, 2016).

Research Design: This has been a cross-sectional study as data was collected at a specific point in time and an *ex post facto* study based on the fact that events had taken place. The accuracy of this approach is largely dependent on the ability of respondents to recall events of the past.

Context: The geopolitical context of this study (South Africa) could restrict the generalisability of the findings for other countries. However, a country specific study of this nature was necessary given that the study derived its impetus from the unemployment situation in SA and the emphasis being laid on the environment and small businesses as the mechanism for employment generation. Moreover, a country specific study was the best alternative given the limitation of time, cost and accessibility to information. Moreover, countries with similar socio-economic challenges and comparable levels of small business development can meaningfully benefit from this study.

7.8 RECOMMENDATIONS FOR FUTURE RESEARCH

As regards future studies on the environment, entrepreneurial orientation and employment growth the following recommendation are made from a theoretical, methodological and contextual perspective.

7.8.1 Theoretical Considerations

The resource-based view and the dynamics capability perspective have largely informed the constructs adopted for this study. Future studies on the environment and entrepreneurial orientation can be investigated through alternative theoretical lenses such as the institutional theory. In this study only two environmental variables (dynamism and hostility) have been examined. Further research could consider other variables from the task environment such as environmental complexity, environmental munificence and environmental turbulence. This will further illuminate the relationship between EO and the environment. Future studies can investigate other variables that could moderate or mediate the relationships between the environment and EO as well as employment growth such as strategic approaches and organisational structure.

In this study, the dimensions of innovativeness and pro-activeness were found to present notable results. The outcome statistical analysis was at variance with prior EO theory. This finding could be considered as inconclusive because these dimensions can be investigated further. Future research can focus on the relationship between these two dimensions both within the South African context and beyond. Cross-country and cross-cultural research offer the benefit of comparison and can contribute immensely to the debate on the evolution of theory on EO.

Since this research focused largely on employment growth of established enterprises future studies can consider start-up (or new) enterprises. These are firms that have less than 42 months of business operation. Moreover, a comparative analysis of employment growth between different phases of business operations (start-up & established phases) could yield interesting findings. Considering the finding that the age of a firm could influence its propensity for employment growth,

studies on young firms in high growth sectors will further clarify the phenomenon of employment generation.

In the review of literature, this study showed that researchers often examine EO from universalistic and contingency perspectives. More studies considering the configurational approach and mediation research can contribute toward advancing the EO theory.

7.8.2 Methodological Considerations

Since studies exclusively on employment growth are limited its measurement is yet to be standardised. Future research is needed to develop a scale that would consider the variables employed in this study and possibly more. This study has been cross-sectional by design. Future studies on employment growth must consider a longitudinal design as this will further shed light on this growth phenomenon.

This study has focused exclusively on positive employment growth. It has not catered for businesses in which there has been a reduction in the number of employees leading to negative growth. Considering the practicality of both scenarios further studies in employment growth should consider both perspectives. The use of quantitative techniques is commonly found in entrepreneurial orientation and growth studies. Further research can investigate the same phenomenon through a qualitative approach.

7.8.3 Contextual Considerations

In this study employment growth was not evident until the size of the firm was considered and specific attention was accorded to the cohort of medium-sized businesses. Hence medium sized businesses may have potential for a better understanding of employment growth. This study has been across a broad range of industries and has not considered the peculiarities of industry growth. Employment growth studies focusing on industries such as ICT and agriculture (high growth sectors in South Africa) will be more enlightening. Additionally, a comparative study across different economic sectors may yield interesting findings.

This study was carried out in the South African context and is skewed toward the Gauteng Province. Further studies on employment growth could focus on other major economic centres with a comparable concentration of small businesses such as the Western Cape and KwaZulu Natal that have not been adequately covered in this study. Furthermore, South Africa is considered an emerging economy. Therefore, future studies should consider economies with comparable levels of small business development for the purpose of benchmarking.

7.9 CHAPTER SUMMARY

The findings of this study have been summarised in this chapter, drawing it to a conclusion. The chapter commenced with an overview of the literature study and the descriptive statistical analysis of the sample. It revisited the research objectives and hypotheses with the purpose of clarifying the outcomes of the hypothesised relationships and describing its implication. Two theoretical models have been presented that illustrate the findings of this study and they show the relationships that have been supported empirically. It is evident that for the entire SMME cohort statistically significant positive relationships were found between the two environmental variables (dynamism and hostility) and the dimensions of entrepreneurial orientation (proactive-innovation, risk-taking, competitive aggressiveness and autonomy). Although a relationship could not be found between the dimensions of EO and employment growth for SMMEs, two of the dimensions (proactive-innovation and competitive aggressiveness) can be associated with employment growth for medium-sized businesses only.

With regard to the contribution of this study to the body of literature, it has been reported in terms of theory, method and practice. Amongst others are its theoretical contribution in terms of context, focus on the environment as antecedents of EO as well as the investigation of its individual dimensions. In terms of methodological contribution, this study has considered an objective measure to employment growth making use of Gibrat's law of proportionate effect.

This chapter has described the practical contribution of the study elaborating on the practical contribution of its findings. This is for the benefit of entrepreneurs and small

businesses owners. It is on this basis that suggestions have been made for small business practice and policymaking.

In conclusion, although this study has made contributions to the body of knowledge, its limitations have been acknowledged and enumerated. Finally, recommendations for future studies on the environment, entrepreneurial orientation and employment growth were considered from a theoretical, methodological and contextual perspective.

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APPENDIX A:

RESEARCH ETHICS COMMITTEE APPROVAL

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Economic and Management Sciences

RESEARCH ETHICS COMMITTEE

Tel: +27 12 420 3395
E-mail: ronel.rensburg@up.ac.za

24 November 2016

Strictly confidential

Dr CE Eresia-Eke
Department of Business Management

Dear Doctor Eresia-Eke

Project:	A contextual study of the relationships between entrepreneurial orientation dimensions and employment growth of small businesses
Researcher:	OJ Dele-Ijagbulu
Student No:	11231212
Supervisor:	Dr CE Eresia-Eke
Co-supervisor:	Dr MN Moos
Department:	Business Management

Thank you for the application you submitted to the Committee for Research Ethics, Faculty of Economic and Management Sciences. I have pleasure in informing you that the Committee formally approved the above study on 23 November 2016. The approval is subject to the candidate abiding by the principles and parameters set out in the application and research proposal in the actual execution of the research.

The approval does not imply that the researcher, student or lecturer is relieved of any accountability in terms of the Codes of Research Ethics of the University of Pretoria if action is taken beyond the approved proposal.

The Committee requests that you convey this approval to the researcher.

We wish you success with the project.

Sincerely

pp PROF RS RENSBURG
CHAIR: COMMITTEE FOR RESEARCH ETHICS

cc: Dr MN Moos
Prof AF Grobler
Student Administration

APPENDIX B:

INTRODUCTION, INFORMED CONSENT AND QUESTIONNAIRE

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Economic and Management Sciences

A contextual study of the relationships between entrepreneurial orientation dimensions and employment growth of small businesses

Research conducted by:

Mr OJ Dele-Ijagbulu (11231212)

Cell: 076 446 9226

Dear Participant

You are invited to participate in an academic research study conducted by Joshua Dele-Ijagbulu, a doctoral student from the Department Business Management at the University of Pretoria.

The purpose of the study is to establish the relationships or lack thereof between entrepreneurial orientation (EO) dimensions and employment growth (EG) amongst small businesses as contingent upon the dynamism and hostility of the environment.

Please note:

- This is an anonymous survey as your name will not appear on the questionnaire. The answers you give will be treated as strictly confidential as you cannot be identified in person based on the answers you give.
- Your participation in this study is very important to us. You may, however, choose not to participate and you may also stop participating at any time without any negative consequences.
- Please answer the questions in the attached questionnaire as completely and honestly as possible. It should take less than 30 minutes to complete.
- The results of the study will be used for academic purposes only and may be published in an academic journal. We will provide you with a summary of our findings on request.
- Please contact my supervisors, Dr Chuks Eresia-Eke, chuks.eresia-eke@up.ac.za or Dr Menisha Moos, menisha.moos@up.ac.za if you have any questions or comments regarding the study.

Please sign the form to indicate that:

- You have read and understood the information provided above.
- You have given your consent to participate in the study on a voluntary basis.

_____ _____

Participant's signature **Date**

1. ENTREPRENEURIAL ORIENTATION

*The statements below evaluate a firm's entrepreneurial orientation which is indicative of its **propensity toward entrepreneurial activities**. Indicate the extent to which you agree or disagree with each statement as it best describes your business.*

	Statement	Strongly disagree	Definitely disagree	Probably disagree	Neither agree nor disagree	Probably agree	Definitely agree	Strongly agree
	RISK-TAKING ITEMS							
1.1	The term "risk taker" is considered a positive attribute for people in our business.	1	2	3	4	5	6	7
1.2	People in our business are encouraged to take calculated risks with new ideas.	1	2	3	4	5	6	7
1.3	Our business emphasizes both exploration and experimentation for opportunities.	1	2	3	4	5	6	7

Statement		Strongly disagree	Definitely disagree	Probably disagree	Neither agree nor disagree	Probably agree	Definitely agree	Strongly agree
INNOVATIVNESS ITEMS								
1.4	Our business actively and often introduces improvements and innovations.	1	2	3	4	5	6	7
1.5	Our business is creative in its methods of operation.	1	2	3	4	5	6	7
1.6	Our business seeks out new ways to do things.	1	2	3	4	5	6	7

Statement		Strongly disagree	Definitely disagree	Probably disagree	Neither agree nor disagree	Probably agree	Definitely agree	Strongly agree
PRO-ACTIVENESS ITEMS								
1.7	We always try to take initiative in every situation (for example, against competitors, in projects and when working with others).	1	2	3	4	5	6	7
1.8	We excel at identifying opportunities.	1	2	3	4	5	6	7
1.9	We initiate actions to which other organisations respond.	1	2	3	4	5	6	7

Statement		Strongly disagree	Definitely disagree	Probably disagree	Neither agree nor disagree	Probably agree	Definitely agree	Strongly agree
COMPETITIVE AGGRESSIVENESS ITEMS								
1.10	Our business is intenselycompetitive.	1	2	3	4	5	6	7
1.11	In general, our business takes a bold or aggressive approach when competing.	1	2	3	4	5	6	7
1.12	Our business tries to undo and out-manoeuvre the competition as best as we can.	1	2	3	4	5	6	7

Statement		Strongly disagree	Definitely disagree	Probably disagree	Neither agree nor disagree	Probably agree	Definitely agree	Strongly agree
AUTONOMY ITEMS								
1.13	Employees are permitted to act and think without interference.	1	2	3	4	5	6	7
1.14	Employees perform jobs that allow them to make and instigate changes in the way they perform their work tasks.	1	2	3	4	5	6	7
1.15	Employees are given freedom and independence to decide on their own how to go about doing their work.	1	2	3	4	5	6	7
1.16	Employees are given freedom to communicate without inference.	1	2	3	4	5	6	7
1.17	Employees are given authority and responsibility to act alone if they think it to be in the best interest of the business.	1	2	3	4	5	6	7
1.18	Employees have access to all vital information.	1	2	3	4	5	6	7

2. ENVIRONMENTAL HOSTILITY

*The statements below evaluate your **industry in terms of competition, business climate and the availability of marketing and investment opportunities.** Indicate the extent to which you strongly agree or strongly disagree with each statement as it best describes the actual condition of the environment in which your business operates.*

Statement		Strongly disagree	Definitely disagree	Probably disagree	Neither agree nor disagree	Probably agree	Definitely agree	Strongly agree
2.1	The failure rate of firms in my industry is high.	1	2	3	4	5	6	7
2.2	My industry is very risky such that one bad decision could easily threaten the viability of my business unit.	1	2	3	4	5	6	7
2.3	Competitive intensity is high in my industry.	1	2	3	4	5	6	7
2.4	Customer loyalty is low in my industry.	1	2	3	4	5	6	7
2.5	Severe prices wars are characteristics of my industry.	1	2	3	4	5	6	7
2.6	Low profit margins are characteristic of my industry.	1	2	3	4	5	6	7

3. ENVIRONMENTAL DYNAMISM (ED)

*The statements below assess the **rate of change and the uncertainty associated with competitors** in your industry. Indicate on the sliding scale of 1 to 7 below the extent to which each pair of statements best describes the actual conditions in which your business operates.*

Statement									Statement
3.1	Our firm must rarely change its marketing practices to keep up with market and competitors.	1	2	3	4	5	6	7	Our firm must change its marketing practices extremely frequently.
3.2	The rate at which services are getting obsolete in the industry is very slow.	1	2	3	4	5	6	7	The rate at which services become obsolete in the industry is very high.
3.3	Actions of competitors are quite easy to predict.	1	2	3	4	5	6	7	Actions of competitors are unpredictable
3.4	Demand and tastes are fairly easy to forecast.	1	2	3	4	5	6	7	Demand and tastes are almost unpredictable
3.5	The service technology used in our business is not subject to very much change and is well established.	1	2	3	4	5	6	7	The modes of service used in our business change often and in a major way.

4. EMPLOYMENT GROWTH (EG =g annual rate of employment growth)

*The questions below intend to **measure growth in employment** in your business. Fill in the appropriate number of employees at each phase of the business.*

4.1	How many workers were employed by the business when it started?	
4.2	How many workers were employed by the business at 3.5 years old?	
4.3	How many workers are employed by the business currently?	

5. DEMOGRAPHIC DETAILS

In response to statements or questions in Sections 5.1 to 5.9 use **X** to make the appropriate selection where necessary.

5.1 **Indicate your gender**

Male	1	Female	2

5.2 **Fill in your age**

	years

5.3 **Indicate your race affliation**

Black	1	Coloured	2	White	3
Indian	4	Other (please specify)		5	

5.4 **Indicate your highest level of education**

High School Matriculation	1
Post-matriculation (for example, a Diploma)	2
Bachelor's Degree/Honours	3
Master's and / or Doctoral	4
Other Qualifications	5

5.5 **How long has your business been in operation?**

	years		months

5.6 **Indicate the economic sector in which your business is classified**

Banking	1	Insurance	2	Investment Services	3
Real Estate Activities	4	Entertainment	5	Telecommunication	6
Hospitality/Tourism	7	Mass Media	8	Health Care	9
Public Health	10	Information Technology	11	Waste Disposal	12
Professional Services	13	Consulting Services	14	Education	15
Franchising	16	Agriculture and Food Processing	17	Mining and Quarrying	18
Manufacturing	19	Construction	20		

5.7 **Indicate the province in which your business is primarily located**

Gauteng	1	Mpumalanga	4	North-West	7
Eastern-Cape	2	Free State	5	Kwazulu-Natal	8
Western-Cape	3	Northern-Cape	6	Limpopo	9

5.8 **Indicate the total annual turnover of your business in million rands**

Below ZAR 3 000 000	1
ZAR 3 000 000 to ZAR 6 000 000	2
ZAR 6 000 001 to ZAR 10 000 000	3
ZAR 10 000 001 to ZAR 14 000 000	4
ZAR 14 000 001 to ZAR 18 000 000	5
ZAR 18 000 001 to ZAR 22 000 000	6
ZAR 22 000 001 to ZAR 26 000 000	7
Above ZAR 26 000 000	8

5.9 **Indicate the total gross assets value of your business excluding fixed property (for example, properties, plant and equipment)**

Less than ZAR 500 000	1
From ZAR 500 000 to ZAR 1 000 000	2
From ZAR 1 000 001 to ZAR 1 500 000	3
From ZAR 1 500 001 to ZAR 2 000 000	4
From ZAR 2 000 001 to ZAR 2 500 000	5
From ZAR 2 500 001 to ZAR 3 000 000	6
From ZAR 3 00 0001 to ZAR 3 500 000	7
From ZAR 3 500 001 to ZAR 4 000 000	8
From ZAR 4 000 001 to ZAR 4 500 000	9
From ZAR 4 500 001 to ZAR 5 000 000	10
Above ZAR 5 000 000	11

Thank you for participating in this study.