

## **RESEARCH ARTICLE**

### **Business incubation and entrepreneurial orientation on the performance of small and medium enterprises**

Name: Jabu Mphambo

Student No.: 17390223

A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

7 November 2018

## **ABSTRACT**

The impact of Business Incubation and Entrepreneurial Orientation on the performance of Small and Medium Enterprises (SME) is seldom jointly tested, hence this study seeks to test the impact of Business Incubation and Entrepreneurial Orientation on SME performance. The research design adopted an analytical, deductive and quantitative approach over a cross-sectional time horizon, using primary data gathered from structured questionnaires. This study found that Business Incubation has a statistically significant impact on SME performance, while the positive impact of Entrepreneurial Orientation on SME performance was not statistically significant. The article proposes that policymakers should strengthen their efforts in supporting SMEs through business incubation.

## **KEYWORDS**

Business Incubation, Entrepreneurial Orientation, Performance, Small and Medium Enterprise

## **DECLARATION**

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Student Name: Jabu Mphambo

Signature:

## **ACKNOWLEDGEMENTS**

I give passionate thanks to my God the Father, Son and Holy Spirit, for carrying me throughout this MBA journey and granting me the grace to manage what appeared to be a hectic life comprised of endless MBA schedules, demanding work projects, balancing family needs and attending Kairos training at church. I have seen the faithfulness of God.

Thank you to my supervisor, Prof. Lulama Makhubela, for tirelessly cheering me on, challenging and inspiring me to aim for the stars.

I want to express my sincere gratitude to my employer, Absa Bank, who provided financial support for my MBA studies, and specifically my manager Mark Antoncich and my Corporate Development colleagues, for their enduring support during my studies.

I am grateful to my pastors, Bishop Mosa Sono and Pastor Pitso Mochela, for supporting me with the much-needed prayers. I would also like to thank Dr. Lamson Maluleke for his continual guidance and wisdom.

Special thank you to my MBA colleagues who have made the MBA journey an experience of a lifetime. I am grateful to my friends who have encouraged and supported me from the sidelines.

A hearty thanks to my mom, Sarah Mkatshwa, and my dad, Thomas Mphambo, for instilling in me a sense of value for education since I was young. I want to single out my mom for her unflinching support and love throughout. A special thanks to my siblings and extended family for bearing with me for my absences from family functions.

My love goes to my wife, Nombuso Mphambo, and my son, Nhlalala Mphambo, who were a constant inspiration, spurring me on to give my best in my studies without a need to worry about anything. Thank you for gracefully accommodating my absences from home on many evenings and weekends.

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## **1. MOTIVATION FOR JOURNAL CHOICE**

The chosen journal for publication of this research article is the Journal of Small Business Management (JSBM). The JSBM is a level 3 journal that primarily focuses on small business management and entrepreneurship. The readership of the JSBM is mostly academic and international, whose topics of interest include family and founder-owned enterprises, small business strategy and organisations, as well as small business policy and economics.

The JSBM is considered a suitable journal for publishing this article given its focus on small business management and entrepreneurship. This article seeks to share information on business incubation and entrepreneurial orientation as drivers of performance for small and medium enterprises. Furthermore, the study also hopes to encourage increased support for small and medium enterprises from policymakers and business incubation organisations. Having regard for the objectives of this article, the readership of the JSBM, as well as the typical topics covered by the JSBM, the JSBM is therefore considered as the journal publication of choice.

JSBM uses ISI citation. The author confirms that journal author guidelines were followed. The journal author sequence shall be as follows: Jabu Mphambo, Lulama Makhubela

## **2. THEORY AND LITERATURE REVIEW**

### **2.1. Introduction**

The purpose of this research is to assess the impact of business incubation (BI) and entrepreneurial orientation (EO) on the performance of Small and Medium Enterprises (SMEs) in South Africa. Prior research has focused on entrepreneurial orientation and business incubation as individual constructs. The literature review below has not found any evidence that the impact of entrepreneurial orientation and business incubation on firm performance has been jointly tested before. Entrepreneurial orientation reflects an internal disposition of a company, while business incubation deals with external support for SMEs. This research argues that assessing the joint impact of these two (internal and external factors) could make a meaningful contribution to existing literature and policy formation by governments. The literature review below is structured as follows:

Firstly, the theoretical basis for the literature is discussed. This is then followed by a review of academic literature on the challenges faced by SMEs and the role played by business incubation in supporting SMEs. Thirdly, a review of the literature on entrepreneurial orientation and firm performance is discussed. Lastly, an overview of key findings from literature is presented.

### **2.2. Theoretical Background: Resource-Advantage Theory of Competition**

The R-A theory was developed by Hunt and Morgan (1995) and recognises the role of resources in achieving a competitive advantage that will yield superior performance. This theory is relevant for this research topic as it helps to explain the role of resources in company performance. Unlike in neoclassical theory, resources are not just land, capital and labour, they also include financial, physical, legal, human, informational, relational and organisational aspects (Hunt & Morgan, 1995). Such resources can be the source of long-term competitive advantage and superior performance (Hunt & Morgan, 1995).

R-A Theory is interdisciplinary and has been developed in the works of various literature disciplines including but not limited to general business, management, marketing, economics and ethics (Hunt & Davis, 2008).



### **2.3. Challenges of SMEs and the Role of Business Incubation**

The survival of SMEs is affected by multiple factors. These include access to financing, social capital, personal characteristics of the entrepreneur, market factors, life-cycle and regional specifications (Wamba, Hikkerova, Sahut & Braune, 2017). Start-ups need financing to cover a broad range of needs, including working capital, employee costs, and to secure facilities or equipment (Wamba et al., 2017).

Privately held firms are plagued with problems of information asymmetry (Wamba et al., 2017) which could contribute to expensive financing for these businesses. As a result, small businesses are usually vulnerable to financial distress (Wamba et al., 2017).

Social networks play a crucial part in securing access to finance. Lee and Drever (2014) argue that a lack of social networks may hinder access to finance. This was also presented by De Jong (2013) who noted that social networks are tied to access to finance, information and legitimacy. The finding further reinforces that ethnic minority groups, whose social network is usually small, may find it harder to access finance (Lee & Drever, 2014). Most individuals who are likely to pursue entrepreneurship possess a higher personal net worth and stronger human capital credentials than those who never attempt to venture into entrepreneurship (Lofstrom, Bates & Parker, 2013). This highlights the role of access to capital and social networks in contributing to the success or survival of SMEs. The researcher posits that it is important to note that some challenges are inherently linked to lack of finance. For instance, with sufficient capital, it is unlikely that a company will struggle for equipment or infrastructure. Similarly, with sufficient infrastructure and equipment, a company's need for financial capital may be reduced.

Similar to large businesses, SMEs also have to comply with regulations. A large part of the literature found that SMEs suffer disproportionately from the burden of regulation due to resource constraints (Fletcher, 2001; Federation of Small Businesses, 2011). This is because regulation is argued to increase the cost of doing business (Chittenden, Kauser & Poutziouris, 2005). However, some researchers argue that regulation promotes SMEs' performance by creating new markets and opportunities (Kitching, Hart & Wilson, 2015).

It is possible that some of the challenges and failures of SMEs could be exacerbated by lack of discipline. This is because owners of SMEs generally do not have to report to external shareholders, implying that performance monitoring within some SMEs effectively does not exist (Tsuruta, 2014).

Governments across the world have attempted to address the challenges faced by SMEs in various ways which include but are not limited to business support programmes such as business incubation.

Research in the field of business incubation began in earnest over three decades ago (Hackett & Dilts, 2004). While this area has gained considerable interest since then, it is worth noting that business incubation started out of a failed business venture when a local real estate agent at Batavia in New York could not secure a tenant for his recently acquired large building (Adkins, 2001). The developer then decided to subdivide the building and sublet it to various tenants, some of whom also requested business advice from him (Adkins, 2001). This was the beginning of business incubation.

The advancement of research in business incubation over the years has led to the evolution of the understanding and definition thereof. Historically, real collaboration was a central part of business incubation (Hausberg & Korreck, 2018). In their early research, Plosila and Allen (1985) defined business incubation as a process involving support for new organisations within a physical infrastructure setting.

Currently, there exists a myriad of business incubation definitions. Bergek and Norman (2008) define business incubation as a process involving a sharing of office space and services. Business incubation is also defined as tools to fast-track the establishment of successful companies (Bruneel, Ratinho, Clarysse & Groen, 2012). While the varying definitions of business incubation indicate a fragmentation of literature and understanding in this area, the underlying theme that is common among these is that business incubation entails some support that is provided to businesses in order to ensure their growth and sustainability.

In recognition of the fact that worldwide, the new forces of economic growth are entrepreneurship and innovation, governments have generally increased their focus in

supporting business incubation initiatives (Lalkaka & Abetti, 1999). The proliferation of business assistance programs such as business incubation reflects the fact that business incubation has become a prevalent economic development instrument (Pena, 2004).

The number of business incubators in the United States of America (USA) was 530 in 1999, thereby reflecting rapid growth since the early days (Lalkaka & Abetti, 1999). While this increase could be generally interpreted as an indication of the positive impact of business incubation, much of the literature has not focused on understanding the impact of business incubation on incubatees (Stephens & Onofrei, 2012). Instead, most of the research in business incubation has instead focused on the incubation centre as the unit of analysis (Pena, 2004). In support of this, Harper-Anderson and Lewis (2017) observe that traditional incubator literature has focused on the role of incubator quality in outcomes. The authors further discovered that the outcomes of business incubation are more reliably predicted by incubator quality (Harper-Anderson & Lewis, 2017).

The above reveals a gap in the understanding of the impact of business incubation on the performance of companies receiving such services.

#### **2.4. Entrepreneurial orientation**

Entrepreneurial Orientation is defined as strategy-making processes that are used to achieve a company's purpose, sustain its vision and create a competitive edge (Rauch, Wiklund, Lumpkin & Frese, 2009). This view is supported by Covin and Slevin (1989) who define entrepreneurial orientation as practices applied by managers to act entrepreneurially. In order to understand what it means to act entrepreneurially, it is crucial to determine what entrepreneurship is. Entrepreneurship is defined as the study of sources of opportunities and how to exploit them (Shane & Venkataraman, 2000).

Based on Miller's (1983) conceptualisation, EO is characterised by three dimensions, namely: Risk-taking, proactiveness and innovation (Baker & Sinkula, 1999). Lumpkin and Dess (1996) later identified two additional EO dimensions, namely: Competitiveness and autonomy. However, Miller's original three dimensions have come to be generally accepted as the entrepreneurial orientation dimensions (Baker and Sinkula 1999;

Wiklund and Shepherd 2005; Kropp, Lindsay & Shoham, 2006). This study has adopted Miller's (1983) dimensions.

Miller and Friesen (1978) describe risk-taking as the willingness to commit substantial resources to uncertain projects where the cost of failure may be high. This definition was later refined as a process involving bold actions involving the use of significant resources to venture in an uncertain environment (Rauch, Wiklund, Lumpkin & Frese, 2009). It would follow that businesses that do not commit considerable resources to their running may not be considered to have risk-taking behaviour. Similarly, if such resources are committed to ventures with guaranteed outcomes, such a commitment may not be classified as risk-taking behaviour.

According to Knight (1997), innovation is described as the pursuit of creative or novel solutions. It also refers to a strong commitment to introducing new products and solutions to the marketplace, as well as the support of new ideas, experimentation and creative processes that may result in new products, services or technology (Zahra, 1993; Eggers, Krause, Hughes, Laraway & Snycerski, 2013). Innovation is an inherent characteristic of entrepreneurship (Sahut & Peris-Ortiz, 2013). However, despite its importance in entrepreneurship, innovation does not necessarily guarantee a likelihood of business survival (Sahut & Peris-Ortiz, 2013). Small businesses provide the most conducive environment for innovation because innovation requires close cooperation of members within a company (Sahut & Peris-Ortiz, 2013).

Proactiveness refers to the predisposition to act in anticipation of future problems, needs and changes (Eggers, Krause, Hughes, Laraway & Snycerski, 2013). Reinforcing this definition, Lumpkin and Dess (2001) define proactiveness as opportunity-seeking actions enacted with anticipation of future demand ahead of competing firms. Therefore, proactive businesses can act in anticipation of future trends (Brettel & Rottenberger, 2013).

Understanding EO in the context of SMEs has become important because according to Brettel and Rottenberger (2013), EO has become a crucial survival condition.

Some studies have found that companies with high EO perform better, although other studies have failed to find this relationship (Wiklund & Shepherd, 2005). Some

researchers have noted that EO does not necessarily lead to higher firm performance (Pelham, 2000; Wiklund, 1999). Given that most of the research on EO has been on large firms, EO research in the context of SMEs is not fully developed (Zhou, Li, Zhou & Su, 2008). This points to the fact that there is room for this research study to make a meaningful contribution to existing literature as it seeks to prove that business incubation and entrepreneurial orientation influence SME performance.

Boso, Story and Cadogan (2013) argue that the presence of EO is not sufficient to improve firm performance, but rather a high level of EO is what contributes to this improvement. This is complemented by other research which indicates that EO pervasiveness is also essential in understanding firm performance (Wales, Monsen & McKelvie, 2011). Therefore, it can be inferred that the presence of EO, pervasiveness and the level of entrepreneurial orientation are essential considerations, given that observations have been made where firms manifested low performance despite managers showing an apparent attitude of entrepreneurial orientation (Wales, Monsen & McKelvie, 2011). This research, however, focuses on the presence of EO.

Initial research on the role of EO on firm performance displayed limitations because it was tested in isolation of other organisational orientations (Lonial & Carter, 2015). In response, some researchers investigated the impact of entrepreneurial orientation, market orientation and learning orientation on multinational company performance (Hult & Ketche, 2001; Hult, Snow & Kandemir, 2003). Building on this, Lonial and Carter (2015) focused on SMEs by investigating the impact of entrepreneurial orientation and market orientation on performance, and a positive relationship was established.

Despite advancement in the entrepreneurial orientation research literature, the researcher could not find evidence that the impact of entrepreneurial orientation on firm performance has been tested alongside business incubation. Furthermore, given that the performance implication of EO is context specific (Wiklund & Shepherd, 2005), it appears that there is a case to test the EO and performance relationship in a South African context. The researcher did not find evidence that this has already been done. This research study seeks to add new knowledge regarding the collective impact of EO and business incubation on SME performance, thereby contributing to the government's commitment to promoting the success and sustainability of SMEs in South Africa.

## **2.5. Firm Performance**

Firm performance has been the subject of research across various disciplines, as researchers sought to understand the impact of internal and external forces on firm performance (Dencker & Gruber, 2015; Kunc & Morecroft, 2010; Morgan, Vorshies & Mason, 2009). The CEO and board chair effect have been found to explain a large percentage of the variance in firm performance (Withers & Fitza, 2017). In other research, market dominance was found to be one of the drivers of superior firm performance (Kunc & Morecroft, 2010). A company's understanding of how its resources integrate can enable better firm performance (Kunc & Morecroft, 2010). The performance of new firms has been found to be varied across industries (Dencker & Gruber, 2015).

Dencker and Gruber (2015) assert that firm performance is best measured using revenues because they reflect a "clean" number from an accounting perspective. However, the use of subjective measures of performance in other research was found to produce a stronger relationship between performance and other firm factors (Morgan, Vorshies & Mason, 2009). Other research has supported the use of subjective measures of performance (Lonial & Carter, 2015; Real, Roldan & Leal, 2014; Li & Atuahene-Gima, 2001).

## **2.6. Conclusion**

The Resource-Advantage Theory of Competition recognises that a company's objective is to achieve superior financial performance, which is impacted by both internal and external factors of the company. In the context of this study, business incubation and entrepreneurial orientation are considered as external and internal factors, respectively. Survival and superior performance of South African SMEs, and ultimately job creation and economic growth, are at the heart of the problem definition of this study.

SMEs face many challenges, including access to finance and infrastructure. Some governments have responded by initiating business incubation programs aimed at supporting SMEs. Research on business incubation has been limited and has barely focused on the tenants of business incubation. The focus has instead been on the

incubator as the unit of analysis. The researcher could not find evidence that the collective impact of business incubation and entrepreneurial orientation on SME performance has been researched, especially in a South African context. Assessing the collective impact of business incubation and entrepreneurial orientation on the performance of SMEs may contribute to enriched policy formation and existing literature. This investigation seeks to form an argument that when providing business incubation services, prioritising SMEs with some level of EO may ensure a higher probability of success and sustainability for SMEs, especially considering that government and business incubation organisations have limited resources.

### **3. RESEARCH METHODOLOGY AND DESIGN**

#### **3.1. Research design**

Research design should be determined by the underlying purpose of the research study (Tharenou, Donohue & Cooper, 2007; Malhotra, 2010; Saunders & Lewis, 2012). The purpose of this study is to understand the impact of business incubation and entrepreneurial orientation on SME performance. Therefore, this research study adopted the philosophy of interpretivism as outlined by Saunders & Lewis (2012). Interpretivism argues that all observation is theory and cannot investigation within the social world cannot reflect objective truth (Leitch, Hill & Harrison, 2010). Application of this philosophy is considered appropriate because this research intends to obtain new knowledge through interpreting observations.

The research design adopted is an analytical, deductive and quantitative approach over a cross-sectional time horizon using primary data gathered from structured questionnaires administered in web survey format.

An explanatory classification is appropriate because this study seeks to establish causal relationships (Saunders & Lewis, 2012) between business incubation, entrepreneurial orientation and SME performance.

A deductive approach is adopted in line with research done by Lonial and Carter (2015). A deductive approach is based on testing of a theoretical proposition (Saunders & Lewis, 2012), which is what this study seeks to achieve concerning the R-A Theory of Competition.

A quantitative approach is considered appropriate for this study because this study seeks to verify hypotheses and investigate relationships between variables. The variables investigated in this study are business incubation, entrepreneurial orientation and SME performance. A quantitative study relies on quantitative information such as numbers, tables and figures (Blumberg, Cooper, & Schindler, 2008). Furthermore, quantitative research may be conducted to verify hypotheses, predict causal relationships, quantify



the variation and describe characteristics of a population (Mack, Woodsong, MacQueen, Guest & Namey, 2010).

The choice of a cross-sectional time horizon was considered appropriate given that this research was undertaken over a short period, which the researcher did not consider to be suitable for a longitudinal time study. A cross-sectional study is a study of a phenomenon at a particular time (Saunders & Lewis, 2012).

Given the lack of relevant secondary data in South Africa to answer the proposed questions in this research study, it was considered appropriate for the researcher to use primary data. The use of primary data applies where researchers conduct direct research themselves to answer specific research questions (Malhotra, 2010).

Similar studies assessing the link between organisational orientation and organisational learning on company performance also adopted an analytical, deductive and quantitative approach over a cross-sectional time horizon using primary data (Brettel & Rottenberger, 2013; Real, Roldan & Leal, 2014; Lonial & Carter, 2015).

### **3.2. Population**

The population of this study is all South African SMEs. Albright, Winston and Zappe (2009) define a population as all of the objects of interest within a research study. Furthermore, a population can be defined as all related entities that exhibit similar characteristics and are bound to be seen as a complete whole (Zikmund, 2003). According to the Bureau of Economic Research (2016), there were 2.25 million SMEs in South Africa in 2016.

### **3.3. Unit of Analysis**

The unit of analysis is an SME that has undergone or is undergoing a business incubation program. An SME is as defined by the National Small Business Amendment Act of South Africa, 2003 (No. 25763). The study did not limit the SME's survey participation based on their tenure of operation.

### **3.4. Sampling Method and Size**

The sampling frame used is the database from the Gauteng Enterprise Propeller (GEP). GEP is a government-owned business incubator based in Gauteng Province in South Africa. SMEs supported by the GEP operate across various industries including services, retail, manufacturing and construction. The GEP was chosen as the sampling frame because the majority of SMEs in South Africa are based in Gauteng (Bureau for Economic Research, 2016), and as such the chosen sampling frame is expected to limit sample representation concerns somewhat.

Non-probability sampling was used. Non-probability sampling reflects a selection technique where a complete list of the population is not available (Saunders & Lewis, 2012). Non-probability sampling is considered appropriate for this research study because it is cost effective and less time to consume (Neuman, 2011).

### **3.5. Measurement Instrument**

A survey questionnaire comprised of structured questions was used for data gathering. This is in line with the approach used in a previous study (Eggers, Kraus, Hughes, Laraway & Snyckerski, 2013).

The questionnaire comprised of four sections, namely: company background information, business incubation, entrepreneurial orientation and perceived firm performance.

The widely used questionnaire developed by Miller (1983) was adopted for EO. The instrument includes two items that measure proactiveness, two items for risk-taking and three items to assess innovation. In line with prior research, Miller's (1983) instrument was used because of its generic questions and because it had a better fit for SMEs (Baker & Sinkula, 2009). These items were measured using a five-point Likert scale, which is consistent with Covin and Slevin (1989) who also used a five-point Likert scale in their research. Other research on entrepreneurial orientation also adopted Covin and Slevin's scale (Real, Roldan & Leal, 2014).

BI was measured based on the work of Peters, Rice and Sundararajan (2004), who found that BI primarily comprises of three factors, namely, free or subsidised infrastructure, training and educational workshops as well as access to a network of a business incubator. Respondents were requested to select “Yes” or “No” to indicate whether the three items applied to them. Any SME that selected a “Yes” on any of the three items was then considered to have received business incubation services.

Consistent with prior research (Lonial & Carter, 2015; Real, Roldan & Leal, 2014), performance was defined as perceived performance, and it was measured using survey measures including financial and non-financial indicators (De Clercq, Dimov & Thongpapanl, 2009). This approach was also used in previous research by Li & Atuahene-Gima (2001). Respondents were required to record their perceptions of the company’s performance based on nine indicators, using a five-point Likert scale (De Clercq, Dimov & Thongpapanl, 2009).

### **3.6. Data Collection**

Data was collected through a survey questionnaire distributed through SurveyMonkey, a web-based online survey platform. Zikmund (2003) defines a survey as a research technique where information is gathered from a sample of people by use of a questionnaire or interview. A web survey was preferred because it is fast, cost-effective and provides access to more respondents (Neuman, 2011). Furthermore, the use of SurveyMonkey was expected to encourage completion of the questionnaires as it is user-friendly.

Data collection was conducted in two steps. The first step entailed a pilot data collection Choi (2014), following which an analysis of the results was done and did not find the need to edit the questionnaire. The second step of the data collection process entailed the actual collection of data that was used for analysis.

Non-probability sampling was used to gain access to a sample of 468 SMEs. An email containing a link to the online survey was sent to the manager or owners of selected SMEs requesting them to participate in the survey. This was followed by reminder text messages after a week. The survey was kept open for a month. In total, 102 SMEs

participated in the survey for a response rate of 21.8%, which is typically suitable for this type of research (Wiklund & Shepherd, 2005). After eliminating five datasets due to missing responses, a total of 97 datasets was considered usable for this study.

### **3.7. Analysis Approach**

To test the model and hypothesis, multivariate analysis techniques were used. These are namely, exploratory and confirmatory factor analysis, multiple linear regression and related assumption tests. Both exploratory and confirmatory factor analyses were conducted to examine the relationships of the items within a group (Beavers, Lounsbury, Richards, Huck, Skolits & Esquivel, 2013). Consistent with the research done by Pearce II, Fritz, and Davis (2010), multiple regression was considered appropriate for this study. All statistical tests were conducted using IBM SPSS Version 25 statistical analysis package (SPSS) at a confidence level of 95%. The Amos Statistical Package was used for confirmatory factor analysis. Questionnaire responses were coded for use in SPSS, and negative items were reverse-coded before analysis. Business incubation and entrepreneurial orientation were treated as independent variables, while SME performance was considered to be a dependent variable.

### **3.8. Limitations**

Although this study makes a valuable contribution to existing literature, the research has some limitations. The dynamic nature of companies implies that companies may change over time and hence the use of cross-sectional data may not always be appropriate. Additionally, the study did not include SMEs that have closed down, and as a result, it is subject to survivorship bias.

The use of perceived performance due to lack of objective financial data is also a limitation given that performance as measured in this study is subjective. Furthermore, reliance on self-reported data also presents a limitation because respondents may have been tempted to rate their companies favourably.

The impact of entrepreneurial orientation on SME performance was not significant at 95% confidence level. This implies that the findings on entrepreneurial orientation should be interpreted with caution and may not be generalised across all SMEs.

Future research should focus on using longitudinal data to investigate the impact of business incubation and entrepreneurial orientation on SME performance. This will help mitigate the limitation of using cross-sectional data and hence account for the dynamic nature of companies. Furthermore, a mix of SMEs across geographic regions should be used in the sample to test if the hypotheses hold under various geographical regions. Although the regression model explained a significant amount of SME performance, the amount explained was small ( $R^2 = 0.08$ ). Therefore, further research should explore other factors that explain SME performance. Furthermore, the sample size of future research should be increased as this may help address some of the challenges observed from the risk-taking construct which recorded lower loadings and explained variances.

#### 4. REFERENCE LIST FOR LITERATURE REVIEW AND METHODOLOGY

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