

**AN INVESTIGATION OF THE IMPACT OF BUSINESS INCUBATION IN  
PROMOTING THE COMPETITIVENESS OF SMES: A CASE OF  
BUSINESS INCUBATOR IN TANZANIA**

**SIGISBERT MATHIAS MMASI**

**A THESIS SUBMITTED IN FULFILMENT FOR THE REQUIREMENTS OF  
THE DEGREE OF DOCTOR OF PHILOSOPHY OF THE OPEN  
UNIVERSITY OF TANZANIA**

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**CERTIFICATION**

The undersigned certify that they have read and hereby recommend for acceptance by the Open University of Tanzania a thesis entitled: "An Investigation of the Impact of Business Incubation in Promoting the Competitiveness of SMEs. A Case of Business Incubator in Tanzania", in fulfilment of the requirements for the degree of Doctor of Philosophy of the Open University of Tanzania.

í í í í í í í í í í ..í í í í í

Prof. Elifas T. Bisanda

(Supervisor)

í í í í í í í í í í í í .

Date

í í í í í í í í í í ..í í í í í

Prof. Matern A. Victor

(Supervisor)

í í í í í í í í í í í í .

Date

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Signature

í í í í í í í í ..

Date

**DEDICATION**

This Thesis is dedicated to the memory of my late Mather, Martina Mathias Soka,  
who passed away on 22<sup>nd</sup> June 2009

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## ABSTRACT

SMEs are considered as key drivers of socio-economic development due to their multifaceted contributions to the economy. However the start-up failure rates are still very high and the desired growth levels are yet to be achieved and consequently some researchers and policy makers have turned to business incubators as a possible boost to enterprise competitiveness through nurturing start-ups. The purpose of this study sought to investigate the impact of business incubator in promoting the competitiveness of SMEs in Tanzania. The study was guided by managerial skills as independent variables, business incubation as the moderator and competitiveness of SMEs as the dependent variable. Quantitative methods like mean, percentages, frequencies and standard deviation were used to describe the findings while inferential statistics like correlation analysis, regression, ANOVA, factor analysis, regression analysis and SEM were used to establish relationships between the independent and dependent variables and the suitability of the model. The hierarchical moderated regression model was used to measure the strength of the relationship between variables; the joint effect model results indicated that the interaction term between business incubation and human skills ( $\beta = 1.384$ ,  $t = 3.142$ ,  $p < .05$ ), technical skills ( $\beta = 1.461$ ,  $t = 3.084$ ,  $p < .05$ ), structural capital ( $\beta = 1.394$ ,  $t = 2.975$ ,  $p < .05$ ) both exhibit a positive significant influence on competitiveness of SMEs. Based on the results from the quantitative and qualitative findings, it was recommended that the Government should be involved in business incubation by sponsoring business incubation centres and facilitating participation of other organizations in the incubation programs.

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## LIST OF ABBREVIATIONS & ACRONYMS

|           |   |
|-----------|---|
| ANOVA     | Analysis of Variance                                  |
| BI        | Business Incubator                                    |
| BOT       | Bank of Tanzania                                      |
| COSTECH   | Tanzania Commission for Science and Technology        |
| EC        | European Commission                                   |
| EFA       | Exploratory Factor Analysis                           |
| EVA       | Equal Variance Deviation                              |
| EVNA      | Equal Variance Not Assumed                            |
| GDP       | Gross Domestic Product                                |
| IC        | Intellectual Capital                                  |
| IPI       | Institute of Production Innovation                    |
| KMO       | Kaiser Meyer Olkin                                    |
| MDGs      | Millennium development goals                          |
| MFIs      | Microfinance Finance Institutions                     |
| MIT       | Ministry of Industry and Trade                        |
| MITM      | Ministry of Industry, Trade and Marketing             |
| MKURABITA | Mpango wa Kurasimisha Rasilimali Biashara za Wanyonge |
| NBIA      | National Business Incubators Association              |
| NISS      | National Informal Sector Survey                       |
| NSGPR     | National Strategy for Growth and Poverty Reduction    |
| OECD      | Organization for Economic Cooperation and Development |
| PhD       | Doctor of Philosophy                                  |
| RBV       | Resource Based View                                   |

|        |   |
|--------|---|
| ROSCAs | Rotating Savings and Credit Associations                      |
| SACAs  | Savings and Credit Associations                               |
| SIDO   | Small Industries Development Organisation                     |
| SMEs   | Small and Medium Enterprises                                  |
| SPSS   | Statistical Package for Social Sciences                       |
| TBS    | Tanzania Bureau of Standards                                  |
| TEMDO  | Tanzania Engineering and Manufacturing Design<br>Organisation |
| TICA   | Turkish International Cooperation Agency                      |
| UKBI   | United Kingdom incubation industry                            |
| UNDP   | United Nations Development Fund                               |
| UNIDO  | United Nations Industrial Development Organization            |
| URT    | United Republic of Tanzania                                   |
| USA    | United State of America                                       |
| USAID  | United States Agency for International Development            |
| VET    | Vocational Education and Training                             |
| VETA   | Vocational Education Training Authority                       |
| VICOBA | Village Commercial Bank                                       |
| VIF    | Variance Inflation Factors                                    |
| WBDBR  | World Bank Doing Business Report                              |
| $X_2$  | Chi square  |
| VIF    | Variance Inflation Factor                                     |
| SEM    | Structural Equation Modelling                                 |

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

Researches into Small and Medium Sized Enterprises (SMEs) have grown strikingly during the last decades. A huge majority of firms worldwide are SMEs, and they play a significant role in the economy (Mathiew, 2010; Islam *et al.*, 2011). It is recognized that SMEs if planned and facilitated appropriately, can play a vital role as engines of industrialization, employment creation, entrepreneurship, income generation, poverty reduction and ultimately contribute to economic development (Chetty, 2009; Mutambi, *et al.*, 2010; Mmasi and Christine, 2012). Ensuring access to capital, education and training programmes that train entrepreneurs and upgrade the capacity of SMEs is cited as the main way in which the Government can assist SMEs growth and reduce failure (Kirkpatrick and Murinde, 2006).

Business incubators facilitate the development of SMEs in the regions, reducing the probability of failure and speeding up the process of business creation by offering infrastructures and facilities to the incubated enterprises (Grimaldi and Grandi, 2005). At the same time, the concept of business incubators is not only related to infrastructure or services facilities, but also to the access to business networks and knowledge transfer. Inter-organizational learning mechanisms are influenced by the utilization of the social capital inside the incubator, which benefits the tenants performance (Fang *et al.*, 2010). It is considered that intangible benefits offered by incubators are more valuable than the tangible infrastructure and services (Fang *et al.*, 2010; and Karataz *et al.*, 2005).

The concept of business incubation is not a new one (Joseph, 2005), but its major importance has only been acknowledged more recently. In the rapidly changing global economy (Bayhan, 2006), the formation of entrepreneurship as well as the creation and formation of competitive SMEs are increasingly recognized as a driving force for economic development (Szabó, 2006), since these SMEs are flexible and therefore able to supply the need for immediate adoption of market changes (Szerb, 2003). In this context, business incubators contribute to the local, regional and national growth and create jobs as well as wealth for the society (Bayhan, 2006).

The primary goal of business incubator is to produce organizations that will leave the incubation program as a self-supporting organization during the start-up period when they are most vulnerable (Aernoudt, 2004), reducing the probability of failure and speeding up the process of business formation by offering infrastructures and facilities to the tenants (Grimaldi *et al.*, 2005). Through the concept of BIs, most countries have improved their economies and perhaps moved a step closer to development.

The primary reason for beginning and emerging SMEs to join an incubator is to build competitive enterprises and to connect and network within their community (Tötterman and Sten, 2005). On a community level, BIs have also been found to be more cost effective, economic development tools than other programs to attract firms to local regions (Sherman, 1999). It is believed that incubation is a valuable mechanism for the formation of a competitive enterprise through interaction with mentors and advisors (Cassim, 2001).

Local governments and policymakers support business incubation because they assume incubators can generate employment, innovation, and growth by helping businesses avoid failure (Erlewine and Gerl, 2004). Likewise, new businesses seek incubation to access knowledge and assistance that will allow them to develop, test, and market new goods and services at a profit. Therefore, this study investigates the impact of business incubation in promoting the competitiveness of SMEs in Tanzania. This is due to the fact that SMEs sector is still struggling in attaining its objectives.

The sector experiences high dropout rate, creating and sustaining low quality jobs, unfavourable legal and regulatory framework, poorly coordinated institutional support, inability to effectively contribute to economic growth, development and ultimately questioning the possibility of Tanzania reducing and eradicate poverty by the year 2025 according to her development vision (Ministry of Industry and Trade, URT 2002, Prime Minister's Office, URT 2009).

These are observed despite the enormous effort made by the Tanzania government to develop the SMEs sector, including among others; The National Strategy for Growth and Poverty Reduction, the Property and Formalization Program, National Microfinance Policy, National Employment Policy and SMEs credit guarantee scheme (Prime Minister's Office, URT 2009). The findings of the study are of greater importance to SMEs operators, business incubator programme, micro finance institutions and donors, policy makers both in private sector and in Government.

## **1.2 Statement of the Research Problem**

SMEs are vital to the promotion of economic development and to the creation of jobs within the economy (Ngowi and Milanzi, 2006). They contribute up to around two thirds of total employment and slightly more than a third of the GDP in emerging economies. If informal businesses are also taken into account, SMEs contribute to more than a half of employment and GDP in most countries regardless of income levels (IFC, 2010). They are regularly the driving force towards radical innovations which are important for the economic growth (Baumol, 2002).

But, despite of their importance to the economic development, SMEs businesses are not competitive and still don't survive very long. Their failure rate is persistently a burning issue in the world and different studies have shown a high failure rate among them compared to large businesses (Harorimana, 2009; Adeniran and Johnston, 2011). Most SMEs mentioned have limited access to finance as the major cause for their high failure rates (Bosma et.al., 2009 and Schiffer and Weder, 2001). Lack of finance leads to limited financial capital, as a result they cannot address other problems such as low technology, poor business network, lack of business skills, poor market access and poor management skills. The SMEs' finance gap is much higher in developing countries and it is the major barrier for their development in developing countries (Tambunan, 2008; Ayyagari et.al., 2007; Beck et.al., 2006).

Previous researchers mention that business incubators in developing countries face a number of challenges concerning the promotion of competitive SMEs (Aernoudt,

2004; Peters *et al.*, 2004; Salem, 2014). Notable challenges identified include lack of venture capital; poor growth rate; lagging productivity; a lack of true entrepreneurship and the public sector still looking for better governance (Stefanovic *et al.*, 2008; Hutabarat *et al.*, 2008; Pandin, 2014). Business incubators often lack the necessary skills to fully contribute to SMEs development (Akcomak, 2009). Concurring with this assertion, Lalkaka (2002) notes that the management staff of most business incubators do not come from an entrepreneurial background; this has resulted in business incubators failing to provide the adequate support required by SMEs.

Due to the lack of competitive SMEs, business incubators' role in entrepreneurial ventures is not being fully realised (Aernoudt, 2004; Peters *et al.*, 2004; Adegbite, 2001). This has resulted in most SMEs failing and being unable to sustain growth (Dba *et al.*, 2008). The failure to promote competitive SMEs has negative impact on their ability to contribute to economic growth and development of the countries particularly Tanzania. Consequently, many studies have been conducted to explore the impact of competitive SMEs in enterprises competitiveness and development, with the focus on SMEs and not on business incubators (Pyysiainen *et al.*, 2006; Van *et al.*, 2007; Lesáková, 2012; Macheke and Smith, 2013; Salem, 2014).

Although several studies have been done on BIs (Skaik, 2013; Patton, 2013), a research gap still exists in the area of the importance of promoting competitive SMEs on the business incubators' success. In fact, this study answers Mkala and Wanjau's (2013) call for research in this area. In the context of Tanzania, although there has been a steady growth in the number of BI-related studies in recent years,

the discourse is still one-sided with an emphasis on the needs and challenges of incubators (Masutha and Rogerson, 2014; Choto *et al.*, 2014).

Additionally, most of the available knowledge of business incubation does not have a sound theoretical foundation (Tamasy, 2007). Hence, academic findings regarding promotion of competitive SMEs through business incubation and the impact of business incubators on new ventures formation are dispersed (Chan *et al.*, 2005). Unfortunately, few academic studies address such issues (Link *et al.*, 2003). Along the same lines, this study therefore aimed to investigate the impact of business incubation in promoting the competitiveness of SMEs through the key value added contributions offered by business incubators to their tenants businesses, and to determine whether any of these contributions were perceived to be more or less important by businesses at varying stages of growth.

### **1.3 General Objective**

The main objective of this study was to investigate the impact of business incubation in promoting the competitiveness of SMEs in Tanzania with a view of increasing the pace of industrialization in the country.

#### **1.3.1 Specific Objectives**

The specific objectives of the study were to:

- i. Investigate on the challenges facing business incubator in their effort to promote SMEs and industrialization in Tanzania.
- ii. Investigate the impact of promoting SMEs through business incubation in Tanzania.

- iii. Investigate and compare the performance of incubated and non-incubated SMEs in a business incubator.
- iv. Indicate the role of business incubators in the industrialization process and propose the best model to adopt in developing business incubators in Tanzania.

### **1.3.2 Research Questions**

Based on the problem statement and the aim of this study four main research questions are posed:

- i. What are the challenges facing business incubators in their effort to promote SMEs and industrialization in Tanzania?
- ii. What are the impacts of promoting SMEs through business incubation in Tanzania?
- iii. What are the extents of the performance of incubated and non-incubated SMEs in the business incubators?
- iv. What are the roles of business incubators in the industrialization process and the best model to adopt in developing business incubators in Tanzania?

### **1.4 Scope of the Study**

The scope of the study was limited to business incubators involved in supporting SMEs in Dar es Salaam, Mbeya and Arusha. The study considered in-house incubators that draw services directly from the incubator. According to Lewis (2008), some incubation programs both operate 'within the walls' and also deliver entrepreneurial support services to off-site client firms referred to as virtual clients. This is typically referred to as incubation 'without walls' or virtual incubation.

There are myriad of incubation services all aimed at business development and growth of SMEs, however, the study will be limited to human skills, technical skills, conceptual skills and structural capital which constitute the variables of this study.

### **1.5 Significance of the Study**

Several factors connected to the growth of the SME sector have been studied in Tanzania. These include macroeconomic environment and certain personal characteristics (Trulsson, 2000) and institutional barriers (Nkya, 2003). Other contributing factors include: sources of finance (Naliotela *et al.*, 2003), firm characteristics (Satta, 2003), strategy and firm characteristics (Mbwambo, 2005), business experience, size of the firm, investment in information technology, business training and external advice (Admassie, 2002) and social capital (Kimeme, 2005). Even though a number of researchers have identified factors that influence the competitiveness of SMEs, no study whatsoever has been conducted so far on an investigation of the impact of business incubation in promoting the competitiveness of SMEs in Tanzania. Such gaps in research suggest that there is a need to study the aforementioned variables.

In this backdrop, the purpose of the current study is to provide feedback on aforementioned Government strategy of incubation in Tanzania. It also draws implications for donor agencies who might consider incubation approach of business development in Tanzania. Incubation driven business support strategy has been adopted by a number of donor agencies, including United Nations Industrial Development Organization (UNIDO), United Nations Development Fund (UNDF)

and Turkish International Cooperation Agency (TICA) in various parts of the world (Scaramuzzi, 2002). This study provides deliberations to donor agencies to envisage the prospects of incubation services in the field of SMEs in Tanzania.

It is also important to note that this study also contributes to the body of knowledge with regard to the formation of competitive SMEs in Tanzania. For years enterprise competitiveness has been a topic of interest to scholars, and this is reflected in the numerous relevant studies. However, these studies have failed to generate conclusive results, partially due to the fact that the way in which firm competitiveness has been measured varies considerably from one study to another (Davidsson *et al.*, 2000).

From a practical perspective, the findings are also expected to be significant to policy makers, SMEs and the public at large. For instance, unemployment in Tanzania is a big problem and right now many people find it difficult to secure employment. Even the Government and other public organizations are reducing their labour force (URT, 2003). Therefore, if the private sector has to be the source of employment creation and economic growth, policies must focus on developing the SME sector. However, the effectiveness of the policy will depend on appropriate knowledge about the factors which influence the formation of competitive SMEs. Thus, this study will shed light on understanding the human skills, technical skills, conceptual skills and structural capital which influence the formation of competitiveness of SMEs.

This finding will also help identify factors that can guide the decisions of financial institutions and practitioners. For example, the significant factors of the findings in

this study can be used by banks and other financial institutions as guidance when making investment decisions. Also, the study will enhance understanding in relation to why some enterprises are competitive in the local and international market whereas others are stagnating. Also, to generate awareness of the formation of business incubator toward the economic development of the country. The results might assist entrepreneurs to determine the best factors that influence enterprise competitiveness.

Similarly, the findings will not only benefit current but also future entrepreneurs. For instance, the conceptual framework can be used for implementation of formation of competitive enterprises in a business incubator in Tanzania. Moreover, the study is in line with the Millennium development goals (MDGs), Tanzania Development Vision 2025, Sustainable Industrial Development Policy (SIDP) and National Strategy for Growth and Reduction of Poverty (NSGRP) which emphasizes the role of individuals and the private sector in poverty alleviation in the country.

### **1.6 The Organization of the Study**

This study is organized into six chapters. Chapter one covers the background of the study, statement of the research problem, study objectives, research questions, the significance of the study as well as the organization of the study. Chapter two presents a literature review in four sections reflecting conceptual material relevant for examining the set specific objectives. The first section introduces and examines the general concepts of SMEs. The second section presents the overview and importance of SMEs to the economic growth of the country, SMEs in Africa and

current status in Tanzania, challenges faced by SMEs in Tanzania and organization and programmes supporting SMEs in Tanzania. The third section presents the concepts and history of business incubator (BI), models and best practice of business incubators, current trend of Business incubation, peculiar characteristics and types of business incubators, goals for establishing BI, benefit and the roles of BI to SMEs, role of BIs as economic development tool, facility and supports included in BI centers, challenges and failure factors for business incubator.

Chapter three gives an overview of research methodology by describing how the research is designed and explaining procedures to be followed during sampling, type of data and their respective instruments as well as the analytical techniques. Besides, the issues of study validity and reliability are discussed in this chapter. Furthermore, chapter four focuses on research findings and interpretation, chapter five cover discussion of the result while chapter six covers conclusions and recommendations based on the results obtained and areas for further research.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter presents the review of literature in four sections reflecting conceptual material relevant for examining the set specific objectives. The first section introduces and examines the general concepts of SMEs. The second section presents the overview and importance of SMEs to the economic growth of the country, SMEs in Africa and current status in Tanzania, challenges faced by SMEs in Tanzania and organization and programmes supporting SMEs in Tanzania.

The third section presents the concepts and history of business incubator (BI), models and best practice of business incubators, current trend of business incubation, peculiar characteristics and types of business incubation, goals for establishing BI, benefit and the roles of BIs to SMEs, role of BI as economic development tool, facility and supports included in BI centers, challenges and failure factors for business incubator.

#### **2.2 Theoretical Literature Review**

A theory is a set of related ideas that come together to explain a phenomenon (Martin and Guerin, 2006). According to Vanderstoep and Johnston (2009) theory is a set of organizing principles that help researchers to describe and predict events. These theories have their roots in economics, management, sociology, psychology and anthropology (Kwabena, 2011). The economic entrepreneurship theory has deep roots in the classical and neoclassical theories of economics, which explore the economic factors that enhance entrepreneurial behaviour.

### **2.2.1 The Concept of Competitiveness**

In the current dynamic economic environment, competitiveness is a critical factor for SMEs, growth, survival and success (Oral and Kettani, 2009). Intense competition requires firms to be competitive for survival. SMEs in developing countries need to enhance their competitiveness to survive by surmounting the limitations in their local markets to thrive. Thriving SMEs due to their contribution will also have an impact on the competitiveness of economies (Liargovas and Skandalis, 2015). Despite the fact that there is agreement and acknowledgement on the need and importance of competitiveness for SMEs and economies, a concise definition of the concept still remains elusive. Competitiveness is a multifaceted and relative concept that makes it complex (Szerb, 2009). This has led to broad and varied definitions of competitiveness based on the school of thought ascribed to.

Ramasamy (1995) defines competitiveness as the ability of an enterprise to increase its market share, profit and growth while sustaining its position in the market for a period of time. According to Porter (1990) firm competitiveness is the ability of a given firm to successfully compete in a given business environment. According to Porter competitiveness is dependent on dynamism, innovation and the ability to change and adjust. Lall (2001) on the other hand considers competitiveness as the ability of a firm to do better than others in terms of profitability, sales and market share. He argues that SMEs competitiveness is essential for them to enhance and defend their position in the market.

Altenburg et al., 1998 defines enterprise competitiveness as the ability to sustain a market position by providing quality products on time and at competitive prices.

Hence for enterprises to be competitive they need the flexibility to rapidly adjust to changes in the market by strengthening their innovative capacity. Firm competitiveness is also considered as its ability to outperform rivals with an impact on its present market share (Stojcic et al., 2011). Pedraza (2014) defines competitiveness as the ability of firms to sell products that meet market requirements while ensuring profits overtime for the firm to enable it survive and thrive in competition.

Competitive enterprises are expected to exhibit higher growth rate in terms of sales and revenues, better returns on investment, higher market share, higher market access and control of distribution as compared to non-competitive firms (Selcuk, 2016). Such firms are characterized by reduced production cost leading to increased profits and have the ability to sell in the market while meeting market requirements. These factors ensure constant profits with an increasing market share in the face of competition (Pedraza, 2014).

Firm competitiveness has been measured using several financial indicators that include return on sales, return on assets and turnover. The advantage of financial performance measures is the easiness of computation as well as the presence of standardized universal definitions. Apart from financial indicators, several non-financial indicators have also been used to indicate competitiveness and these include market indicators like market share and market share growth of the firm (Liargovas and Konstantinos, 2009). For firm competitiveness, sales, volume, productivity and market share have been used as indicators. Financial performance has also been used to indicate market share (Buckley et al., 1988).

### **2.2.2 Small and Medium Enterprises (SMEs)**

Like entrepreneurship, there is no single, uniformly accepted definition of SMEs (Storey 1994). Different countries define SMEs differently depending on their level of development. Rutashobya *et al.*, (1999) have found that there were more than 50 different definitions in 75 countries. Although there are several definitions, a distinction can be made between qualitative and quantitative definitions. The former define SMEs based on quantitative characteristics, whereas the latter defines SMEs based on qualitative characteristics. Within these two types, the quantitative definition is commonly used for defining SMEs, and often the definition is based on the number of employees, sales turnover/revenues, total assets and capital invested in machinery. The first three criteria are most widely used in defining SMEs. In support of this fact, USAID (1993) shows that the majority of countries use the number of employees or total assets to define SMEs.

Accordingly, in the context of Tanzania, SME is a term used to refer to Micro, Small and Medium-sized Enterprises (MSME) in non-farming activities, which include mining, commerce, manufacturing and services (URT 2003). Furthermore, the number of employees and capital invested in machinery are the two criteria used to define SMEs in Tanzania. Subsequently, a micro enterprise is defined as a firm with fewer than five employees, whereas a small firm is a firm with 5 to 49 employees and a medium-sized enterprise is a firm with 50 to 99 employees. Any firm with 100 employees or more is regarded as a large enterprise (Table 2.1). In the case where an enterprise falls under more than one category, the level of investment would be the deciding factor.

**Table 2.1: SMEs in Tanzania**

| S/N | Category          | Employees     | Capital Invested (Tshs.)  |
|-----|-------------------|---------------|---------------------------|
| 1   | Micro enterprise  | 1 ó 4         | Up to 5 mil.              |
| 2   | Small enterprise  | 5 ó 49        | Above 5 mil. To 200 mil.  |
| 3   | Medium enterprise | 50 ó 99       | Above 200mil. To 800 mil. |
| 4   | Large enterprise  | 100 and above | Above 800 mil             |

**Source:** URT, 2003a

### 2.2.3 Definition of Business Incubation

The literature contains various definitions in an attempt to characterize BIs. Cullen *et al.*, (2014) and Chirambo (2014) define BIs as a business development tool that is used to grow entrepreneurial venture by providing a platform for enterprises to build their businesses. Along the same lines, Lose (2016) and Ndabeni (2008) refer to BIs as organizations that provide and facilitate a protected environment to start-up and existing businesses by providing a comprehensive range of shared services with the aim to minimize start-up failure. Hence, Masutha and Rogerson (2014) and Dubihlela and Van Schaikwyk (2014) point out that business incubation is one of the strategic tools for helping SMEs during their start-up period. These authors also point out that in both developed and a developing country, business incubation is viewed as a vehicle to reduce the high mortality of SMEs business.

Drawing from the foregoing definitions, BIs are mainly for the purpose of promoting and fostering the development of new and existing businesses (Mothibi, 2014; Lose *et al.*, 2016). Masutha and Rogerson (2015) and Diedericks (2015) deduce that business incubators provide small businesses with technical and

business consultancy services and targeted infrastructural support services. Therefore, the performance of the incubator should be measured based on the number of incubator's graduates and jobs created.

#### **2.2.4 The Incubation Concept**

The concept of BIs has evolved over the last 50 years (Mutambi, 2010). The first BI was founded in 1959 in Batavia, New York, in the United States, but until the 1970s the concept was unique and the aim was to support start-up companies that needed guidance and venture capital to get their ideas off the ground (Lesakova, 2012; Soltanifar 2012), but the concept became widespread first during the 1980s. The core value proposition of the first generation of BIs was infrastructure and economies of scale. According to Bruneel *et al.*, (2012) these incubators typically provided affordable office space leased in favourable conditions, with shared resources such as meeting rooms and private parking spaces.

The second generation of BIs evolved later in the 1980s when technology firms became the corner stone for economic growth. These incubators' clients typically lacked business experience and marketing skills and, therefore, the value proposition of the BIs was extended into including knowledge-based services. Bruneel *et al.*, (2012) also noted that nurturing was typically a large part of the knowledge support and usually it covered both managerial and scientific areas of expertise.

In the 1990s, networking with potential customers, technology partners, suppliers and investors became more essential for business survival. Consequently, the value

proposition of the third generation of BIs was more focused on creating valuable networks for the tenants (Bruneel et al., 2012). According to some researchers, networking is the most important factor for the success of BI programs. Networks ease the acquisition of resources and specialized expertise, provide learning opportunities, and allow new firms to build up legitimacy faster (Hansen, et al 2000).

### **2.2.5 Human Capital Theory**

Human Capital theory was proposed by Schultz (1961) and developed extensively by Becker (1964). Schultz (1961) in an article entitled "Investment in Human Capital" introduces his theory of Human Capital. Schultz argues that both knowledge and skill are a form of capital and that this capital is a product of deliberate enterprise growth. The concept of human capital implies an investment in business through education and training. Schultz compares the acquisition of skills and knowledge to acquiring the means of production. The difference in earnings between entrepreneurs relates to the differences in access to education and health. Schultz argues that investment in education and training leads to an increase in human productivity, which in turn leads to a positive rate of return and hence of growth of businesses.

This theory emphasizes the value addition that people contribute to an enterprise. It regards entrepreneurs as assets and stresses that investments by enterprises in entrepreneur will generate worthwhile returns. The theory is associated with the resource based view of the strategy developed by Barney (1991), the theory proposes that sustainable competitive advantage is attained when the firm as a

human resource pool that cannot be imitated or substituted by its rival. For the enterprise investments in training and developing employer is a means of attracting and retaining people. These returns are expected to be improvements in performance, flexibility, productivity and the capacity to innovate that should result from enlarging the skills base and increasing levels of knowledge and competence.

Schuler (2000) propose that the general message in persuasive skills, knowledge and competencies are key factors in determining whether enterprises and firms will prosper. According to Hessels and Terjesen (2008), entrepreneurial human capital refers to an individual's knowledge, experiences and skills related to the entrepreneurial activity. Entrepreneurial human capital is important to entrepreneurial development.

Previous empirical research has emphasized that human capital is one of the key factors in explaining enterprise growth. Brüderl et al., (1992) argue that greater entrepreneurial human capital enhances the productivity of the founder, which results in higher profits and, therefore, lower probability of early exit. Moreover highly educated entrepreneurs may also leverage their knowledge and the social contacts generated through the education system to acquire resources required to create their venture (Shane, 2003). In addition to education, specific human capital attributes of entrepreneurs, such as capabilities that they can directly apply to the job in the firm, may be of special relevance in explaining business growth (Colombo and Grilli, 2005). The specific human capital can be attained through precise training and previous experience.

More focused business training can provide the entrepreneur with a specific knowledge, compared to a formal education. This kind of specific human capital also includes knowledge of how to manage a firm, that is, entrepreneur-specific human capital (Collombo and Grilli, 2005). In particular, entrepreneurs with great industry-specific and entrepreneur-specific human capital are in an ideal position to seize neglected business opportunities and to take effective strategic decisions that are crucial to the success of the new firm (Collombo and Grilli, 2005).

#### **2.2.6 Social Network Theory**

Enterprise strategic actions are influenced by the social network within which it is embedded. Social network theory views social relationships in terms of nodes and ties, nodes are the individual actors within the networks, and ties are the relationships between the actors. There can be many kinds of ties between the nodes. Social networking theory emphasizes the relationships between nodes in contrast to attributes of the nodes hence renders itself useful for explaining many real world phenomena (York-university, 2014).

Social networking theory can extend to examine how enterprises interact with each other in the network that provides ways for enterprises to gather information deter competition and even collude in setting prices or policies (York-university, 2014). The social network theory provided to this research study lens for evaluating how growth sprouts through the interactions of actors in the business incubation sector. It forces us to consider not the characteristics of the actors themselves but rather on their business interactions.

### 2.2.7 Resource Based View Theory

Most of the research studies in the business incubation literature have utilized the resource based view (RBV) theory to investigate the critical factors for successful business incubation (McAdam and McAdam, 2008; Nosella and Grimaldi, 2009; Todorovic and Moenter, 2010; Somsuk et al., 2010; Somsuk et al., 2012). This theoretical approach was also considered as an underpinning framework for this study. Barney et al., (2011) showed that the resource based view has reached such a level of precision and sophistication that it resembles a theory rather than a view.

The sources of advantage are of two broad types: resources, representing assets controlled by the enterprise that is used as inputs to enterprise processes and capabilities, which is a measure of enterprises ability to combine, develop and use its resources to create competitive advantage (Kaleka, 2002). These resources and capabilities can be viewed as bundles of tangible and intangible assets, including enterprises management skills, its incubator processes and routines, and the information and knowledge it controls (Barney *et al.*, 2001). A resource refers to an asset or input to production (tangible or intangible) that an incubator owns, controls or has access to on a semi-permanent basis (Helfat and Peteraf, 2003). The essence of this model is that the four conditions underlie sustained competitive advantage, all of which must be met.

According to Mathur et al., (2013), for an enterprises resources to have the potential to be the basis of a competitive advantage,  $\tilde{\alpha}$ (a) it must be valuable, in the sense that it exploits opportunities and/or neutralizes threats in enterprise environment, (b) it must be rare among an enterprises current and potential

competitors, (c) it must be imperfectly imitable, and (d) there cannot be strategically equivalent substitutes for this resource that are valuable but are neither rare or imperfectly imitable.

On the other hand, capabilities are features of the enterprise and managerial skills forming enterprise routines that lead to competitive advantage (Akio, 2005). A "capability" is deemed to be a special type of resource; an incubator embedded on transferable enterprise specific resource the purpose of which is to improve the productivity of the other resources possessed by the firm (Makadok, 2001). RBV has been one of the most significant theories in the field of strategic management. However, some researchers have criticized RBV in terms of its theoretical and practical applicability (Sheehan and Foss, 2007).

Priem and Butler (2011) noted that the elemental RBV is not a theoretical structure. Lockett *et al.*, (2009) point out in addition that the RBV is tautological if the enterprise's possession of unique capabilities cannot be ascertained independently of their description. Other critics argue that the RBV's concepts of "valuable" and "rare" resources do not fulfil the conditions for acquiring and realizing a competitive advantage (Akio, 2005). Some point out that it lacks the concept of activities and argue that it has not reached its full potential in the field of strategy (Sheehan and Foss, 2007). Kraaijenbrink *et al.*, (2011) disagreed with most of these criticisms but suggested that they clearly provide a service by creating a forum within which the creation, development and future of resource based models of competition can be discussed and debated.

More recently Kraaijenbrink, *et al.*, (2011) suggested the RBV's core message can withstand five of these critiques quite well, especially when the RBV's variables, boundaries and applicability are more clearly specified. They conclude, however, that the RBV can fulfil its promise as a central theory of sustained competitive advantage (SCA) only through a reconsideration of these fundamentals. The RBV model appears well suited to the present research objectives. It is a compelling theory and can provide insight into the way in which the business incubator values and selects tenants (Hackett and Dilts, 2008).

## **2.3 Empirical Literature Review**

### **2.3.1 Dimensions of Business Incubation**

Business incubation takes place along three main dimensions: business support, infrastructure and access to networks. These dimensions emerged throughout the evolution of incubation models but have an implicit theoretical basis. Consider the case of infrastructure. BIs concentrate a certain number of companies housed under one single roof. This creates economies of scale (Lesakova, 2012) and allows BIs to offer office space at reduced rates, often competitive when compared to other available real estate options.

Further, infrastructure frequently includes other shared services such as meeting rooms, reception or car parking. Scope economies are in this case responsible for the cost reduction to tenants. Scale and scope economies surrounding infrastructure provision have several other advantages to tenants. First, tenants reduce their overhead costs by leasing office space bundled with the other shared resources. Second, services such as reception or meeting rooms would be difficult, if not

impossible, for nascent firms to establish. Third, key-in-hand office space also eliminates the burden of planning, setting up and paying individual providers. Tenant companies do not have to put any effort or time in managing complementary services which allow them to concentrate on the ventures core activities. Finally, the economies of scale are, in many cases, strengthened by the subsidy generating a capacity of BIs, which they partly transfer to their tenants.

Business support is related to accelerating the learning curve of nascent companies. New firms often lack the necessary management skills and experience to cope with sudden environmental shifts and rapidly changing environments (Zahra et al., 2006). Through a process of learning by doing, new firms change their behaviour and develop a set of routines. These routines include forms, rules, procedures and strategies around which organizations are constructed and through which they operate (Bergek and Norman, 2008a). People evaluate, make sense of the effects and organizational outcomes of past actions and draw conclusions, which results in reshaping their cognitions (Bigley and Margarethe, 2002) and changing the behaviour of the company.

Developing routines and capabilities through experiential learning is a slow and gradual process (Smith, 2004) and the lack of such routines in enterprise early stages contributes to a higher death propensity (Sipos and Szabo, 2006). Due to market imperfections, identifying and hiring relevant expertise and experience poses a serious difficulty especially for nascent. In contrast with consultants who typically have little experience with start-up companies, tailored, a hand on business advice from seasoned incubation management is more productive and

helpful. Furthermore, founders need active coaching in addition to training (Clarysse and Bruneel, 2007). Consequently, incubated enterprises do not have to go through a process of trial and error but can accelerate their learning curve. As a result, incubated new ventures will be able to make better and faster decisions, which results in better strategies and eventually superior performance (Akçomak, 2009).

Access to networks is the BIs contribution to help new enterprises overcoming their inherent resource scarcity outside the incubator's context. BIs typically manage a network of professionals who can provide access to important resources which lay outside the incubator's scope. One example is venture capital. The lack of financial capital, often combined with inexperienced management teams hinders the development and subsequent growth of start-up companies. Research shows that these firms overcome their resource constraints through networking and thereby accelerate firm growth (NBIA, 2009).

Further, Lewis (2001) argues that entrepreneurial companies use networks to access resources that are beyond their financial capacity. BIs help enterprises in this respect, building networks with early stage investors such as business angel networks and venture capitalists, reducing thereby search costs for tenants companies and acting as brokers. New enterprises seldom have access to established networks for hiring specialized advice on very specific topics such as strategy consulting (Lee and Osteryoung, 2004) or patent attorneys (Rice, 2002). For instance, a venture trying to gain access to professional advice on a specific field of intellectual property (IP) expertise might fail to do so because it does not

have enough financial means to pay high consultancy fees.

There are two important side effects within BI delivering support along these three dimensions with the potential to amplify the incubator's impact on tenant companies. First, there are networking and agglomeration effects when companies are gathered in the same location. Practitioners frequently boast the usefulness and intensity of inter-tenant contacts (Lesakova, 2012). Indeed, partnering with other organizations also offers the opportunity to acquire new knowledge (Yli- Renko et al., 2001) and develop new capabilities (Lesakova, 2012). Building knowledge and capabilities through inter-organizational relationships are faster than if the enterprises were to develop the knowledge and capabilities internally (Bruneel, 2010).

The acquisition of knowledge and real time information is especially important in high velocity markets where knowledge is advancing rapidly (Clarysse and Bruneel, 2007). Networking with other companies also provides the firm with greater legitimacy in the market place (Aldrich, 2010) which in turn has a positive impact on their chances of survival. Several studies already showed that new enterprise has little organizational legitimacy which limits their opportunities for resource acquisition and propensity to survive (Clarysse and Bruneel, 2007). It is therefore desirable that BIs' management actively promotes tenant interactions in ways that go beyond informal and merely supportive (Totterman and Sten, 2005).

Second, tenants can increase their legitimacy in the market by being located within a BI. New firms often deal with the lack of legitimacy when competing in the

market with older established firms. Bergek and Norman (2008) showed that the acquisition of legitimacy through exchange relationships with other organizations increases firms' chances for survival. This can be the case of tenant firms housed in BIs. Further, McAdam, (2008) showed that tenants firms highly value the credibility associated with acceptance by the BI. This suggests that location within a BI display an external signal of quality to potential clients and markets.

### **2.3.2 Different Types of Business Incubators**

Previous research has tried to classify different types of incubators in order to facilitate taking goal and objective into account when evaluating incubator performance (Aernoudt, 2004; Peters et al., 2004; Grimaldia and Grandia, 2005). Peters et al., (2004) categorized incubators into three groups: non-profit incubators, which typically are small business incubators that focus on diversifying the local economy, university incubators, which support commercialization of research results generated by universities and research institutes (OECD, 2013), and for-profit incubators, such as private organizations.

Aernoudt (2004) made another type of categorization where he differentiated between mixed incubators, economic development incubators, technology incubators, social incubators and basic research incubators. These different types of incubators objectives range from employment creation to Blue-Sky research (Aernoudt, 2004). Grimaldia and Grandi (2005) made an additional effort to categorize incubators into four main groups. This categorization includes business innovation centres, university business incubators, independent private incubators and corporate private incubators.

### **2.3.3 Current Trends of BI**

The traditional first and second generation incubators in industrializing countries were focused on providing business entrepreneurs with lab, workspace, shared office facilities, administrative support with minimal advisory and networking services (Lalkaka, 2000). Although the Government, chamber of commerce and university sponsored business incubators have occupied this space for years, their primary missions have not been aligned with the interests of the entrepreneurs they host. Rather, they have revolved around economic development, job creation, provision of fee based services and generation of royalties for universities. This misalignment can ultimately hurt the entrepreneur; in some cases, the entrepreneurs may end up paying much money for services they may not need rather than getting just the services needed at a price the entrepreneur can afford. Traditional incubators are typically not staffed with full time, dedicated executives with relevant entrepreneurial experience (Bers and Dismukes, 2009).

Currently, the third generation incubator models, such as international enterprise centres or international business incubators have emerged. They are intended to create high tech and knowledge based ventures by synergizing and linking the global R&D community, venture capital and international joint ventures. The current 7,000 business incubators worldwide will be expected to grow as other nations also are looking to business incubators as a way to stimulate economic growth. InfoDev, an arm of the World Bank Group, is actively promoting business incubator development in less developed countries through its business incubation initiative.

Also, the United Nations Industrial Development Organization (UNIDO) oversees more than 500 incubator projects in developing and transitioning economies. The European Commission provides funding to nearly 160 business incubation programs (Monkman, 2010). As the movement toward the establishment of business incubation facilities has expanded during the past decade or so, the numbers of regional and national, as well as international, associations and networks have emerged (Johnsrud, 2004).

The next generation incubators are expected to be for profit and sector specific. Incubator facilities provide space for fields varying from food services to software development, to arts and crafts (Antoine et al., 2008). In developing countries, most incubators are still funded by the Government and the for profit idea is yet to develop (Akcomak, 2009). For those wanting to make the transition in this millennium to the third generation business incubators, the primary requirement is to enhance the quality of their management, marketing and personnel support for client companies, actively promote the innovation process and facilitate access to finance (Lalkaka, 2000). In some nations; such as Korea, China and India the concept is fully understood such that the private sector release is also engaged in the setup process. In order to promote the concept, Governments should play an indispensable role by devising a supportive policy and taking the first initiation to establish business incubators.

#### **2.3.4 Benefits of Business Incubation**

Business incubators can play an active role in local, regional and national economic development efforts (Claggett, 2003). For the affiliated university, the BI

offers opportunities to build firms led by local faculty, scientists and engineers while enabling society to reap the rewards from investment in local universities and research institutes. The incubator also provides employment opportunities, part time and full time, for university students and graduates. For the start-up venture, the incubator offers the promise of creating a new business at higher survival rate, with reduced duration and costs. For the community, these businesses stimulate economic activity, with the collateral growth of suppliers and customers.

Significant tertiary effects come from the incubator playing a catalytic role in developing entrepreneurial skills, modifying the culture of university industry relations and influencing national policies toward small businesses. For the state, the BI is a demonstration of its commitment to promoting employment, business commercialization, regional development and exports, while securing returns as corporate and personal taxes which are typically many times the net subsidy (Lewis, 2008; Monkman, 2010).

The following are the major benefits that can be achieved by business incubation establishments (Claggett, 2003).

- i. **New Business Formation:** It is the most common economic development focus of incubators around the world. These programs focus on supporting entrepreneurs from business concept development to product launch.
- ii. **Business Stabilization:** A number of regions around the world have begun to investigate ways to use incubators to reach out to and help existing small to medium sized enterprises that have become unstable for one reason or another.

- iii. **Business Expansion:** A number of regions around the world have also begun to use business incubators to help existing small to medium sized enterprises expand. These programs provide service to help business owners improve operational efficiency, identify and access new markets, expand production capabilities, hire and manage labour and secure capital.
- iv. **Business Attraction:** A recent enhancement by economic development professionals is to use business incubators to attract businesses to a region.

In general, business incubators afford a means of enhancing overall economic growth and development, facilitating restructuring, technology diffusion and commercialization, and creating jobs. The role of technology incubators as technology transfer mechanism, as supporting the development of small and micro enterprises, and as an overall economic development tool.

### **2.3.5 Role of BIs for Supporting SMEs**

In both developed and developing economies, small and medium enterprises (SMEs) are considered crucial to fostering economic and social development. The failure rate of small new businesses in their initial years is high in both developed and developing economies, particularly in Africa where there is a higher percentage of inexperienced workers starting businesses. The failure may arise from the competitive environment within which the businesses are launched and also the effectiveness of the specific business idea. It is also a consequence of the lack of experience of the entrepreneur who is launching the business and deficiencies in the environment such as shortage of capital, legal difficulties, lack of information, etc (WB, 2010).

Business incubators provide focused support to entrepreneurs through a supportive environment that helps them establish their business ideas and develop their concepts into market ready products, supports the acquisition of business knowledge, facilitates the raising of necessary finance, introduces the entrepreneurs to business networks, all of which should substantially reduce the level of failure. They increase new entrepreneurs' chances of survival and success by building capacity and networks (Monkman, 2010).

Moreover, the BI can play a vital role in increasing the awareness levels of the SMEs to know the emerging trends in technology and business opportunities. This attempt at bringing in business incubators to support the SMEs development will provide a new dimension to the business incubation movement and will also lead to evolving growth accelerator programs as a major value benefit to SMEs. The SMEs in need will get a personalized and holistic support (Balachandran, 2008). Generally, incubation programmes can increase survival rates dramatically when programmes are well run and help SME to manage risk and build competitiveness through early, high risk growth stages. In this respect, business incubation program plays a major role by providing business development services for SMEs.

### **2.3.6 Overview of SMEs**

According to Asmelash (2002) countries that have made economic breakthroughs in the last two decades demonstrate beyond doubt that the development of enterprises has been the necessary condition of economic growth and development. According to Asmelash (2002), the significant role SMEs play in development is acknowledged the world over. He cited the work of Schell, (1996) who noted that

in developed countries such as the United State of America (USA), where big corporations are dominant, SMEs still play an enormous role in the country's economy.

According to the report of the Indian working group on science and technology for small and medium scale enterprises, SMEs occupy an important and strategic place in economic growth and equitable development in all countries (Tambunnan, 2007). Constituting as high as 90% of enterprises in most countries worldwide, SMEs are the driving force behind a large number of innovations and contribute to the growth of the national economy through investments, exports and employment creation. Owing to the success of the Asian tigers, interest is running high globally particularly in developing countries that are in the rat race to meet up and reduce the development and economic gap (Tambunnan, 2007).

Chinese and foreign experts estimate that SMEs are now responsible for about 60% of China's industrial output and employ about 75% of the workforce in China's cities and towns (Schell, 1996). These SMEs create jobs for workers who have been laid off from state owned enterprises due to the steady transition from communism to a market based economy.

### **2.3.7 SMEs in Africa**

Despite the claims globally to the potential success of SMEs, Africa is yet to catch up with the fever. In the words of Asmelash (2002), despite the repeated public announcements about their assumed importance as instruments of development, SMEs in many African countries enjoy a lukewarm support. They lack effective

organization and knowledge of modern management techniques. Organizations created to promote SMEs are not sufficiently prepared for the task and the interference with policy makers leaves much to be desired.

SMEs remain a veritable tool for the encouragement of entrepreneurship, creating immediate employment opportunities, promoting inter and intra-regional trade, breaking the monopoly of larger enterprises as well as alleviating poverty (Cook and Nixon, 2000) world over. They can usually be established rapidly and put into operation to produce quick returns. Several African SMEs do not fall short of these qualities but that cannot be justified in the present scheme of things. The reason, however, is not far fetched because corruption and political instability continue to thrive. Most of the SMEs have remained at the micro level (Olomi, 2001). This phenomenon in Africa has been referred to as the missing middle (the lack of medium sized enterprises, as SMEs, can be categorised as micro, small and medium sized firms) and continues to be a long term concern for African policy makers (Kibera, 1997). As a consequence, more research, particularly into the growth of SMEs in African countries, is required in order to understand the factors that contribute to the growth of SMEs (Olomi, 2009).

#### **2.3.8 SMEs in Tanzania**

Like many other developing countries, Tanzania has recognised the importance of SMEs for economic development and poverty alleviation. Historically, Tanzania, after its independence, chose the path of socialism and self-reliance for national development. Along with this path, almost all means of production and exchange were put under the direct control of the State. As a result, major businesses were

nationalised and the Government, through its parastatals owned almost all the activities and investments that had previously been in the private sector. This policy recorded marked achievement in social development during the 1970s and 1980s, particularly with primary education and the delivery of health services as well as in water supply and sanitation (Temu et al., 2000).

However, the nationalization of the private sector led to poor economic results and a number of macroeconomic imbalances and consequently, an economic crisis that lasted over a decade (Kanaan, 2000). This crisis signalled a need for movement towards a market economy, the adoption of policies that would facilitate a smooth transition from an administratively state controlled economy to a functioning free market economy (Temu and Due, 2000).

Responding to this, the Government of Tanzania has, since 1985 been undertaking a series of economic reforms. The main areas of adjustments were: trade liberalization, a review of tax structures and public sector reform (URT, 2003b). Public sector reform involved a shift from the public sector led economy towards market liberalization and the promotion and encouragement of private sector initiatives. The private sector was promoted and thus became both a major source of employment and the engine of economic growth in Tanzania.

In the 1990s, the significance of the private sector to economic growth became very clear and was widely recognised; available data suggest that about a third of the Gross Domestic Product (GDP) originates from the SME sector (URT, 2003b). Since then, a number of policies and programmes have been undertaken to

strengthen and widen the role of the private sector in economic development. These policies and programmes include the Small Industry Development Organisation (SIDO), which was established with the aim of planning, coordinating and offering services to SMEs. Furthermore, at the national level, Vision 2025, National Strategy for Growth and Poverty Reduction (NSGPR) was established, a programme which emphasises the significance of the private sector as the engine of economic growth in Tanzania (URT, 2003b).

In addition, with the aim of promoting the growth of SMEs, the Ministry of Industry, Trade and Marketing has established an SME department and business incubator to enhance the growth of SMEs sub sector. This department is responsible for encouraging, promoting and strengthening the business environment in Tanzania. Unfortunately, despite the existence of various programmes, the outcomes of these efforts have generally yielded poor results with only a few SMEs managing to expand and develop.

Despite the importance of the SME sector in economic development, it is difficult to get recent and reliable data regarding the current status of the sector in Tanzania. Even the total number of SMEs is unknown. Due to this limitation, most SME reports rely on data from the National Informal Sector Survey (NISS), conducted by Bagachwa et al., (1993). The NISS 1991 survey reported a total of 1,801,543 SMEs, employing 2,369,380 people. Accordingly, about 75% of the people employed in the sector are sole proprietors. Subsequently, according to the NISS 1991 report, the SME sector has the following main characteristics.

- i. SMEs are found to be concentrated in certain trades such as restaurants and

hotels (51.8%), manufacturing (24.0%), street food vending (11.0%), and urban agriculture (10.0%);

- ii. Most of them (70.0%) are not formally registered;
- iii. The majority of enterprises are relatively new with the age of entrepreneurs concentrating between 25 and 39 years;
- iv. Most of the owner managers have limited access to formal education and training.

Additionally, it is estimated that there are approximately 2.7 million enterprises in the country, about 60.0% of which are located in the urban areas (Mlingi, 2000). The majority (98.0%) of these firms are micro enterprises. This implies that medium sized and large enterprises in the economy are extremely few and far between.

Most (66.0%) of the micro and small enterprises have an annual turnover of less than US \$2,000 and were established as a survival strategy (Wangwe, 1999). Moreover, the estimates by Mlingi (2000) show that there will be about 700,000 new entrants into the labour force in each of the coming years. About 500,000 of these people are school leavers with few marketing and entrepreneurial skills. The public sector will employ only about 40,000 of the new entrants into the labour market, leaving about 660,000 to join the unemployed or the underemployed. Most of these people end up in the SME sector, and particularly in the informal sector. The informal sector comprises small businesses which are operating without licenses, which have a lack of permanent business premises and which do not comply with tax and other Government regulations (Olomi, 2009).

The survival rate of these emerging SMEs is also low; less than 40% survives the first five years of operation. Although SMEs are found in all sectors of the economy, they are dominant in trade (54.0%), followed by services (34.0%) (Kristiansen, *et al.*, 2005). This is because of SMEs, as identified above, require minimum capital and involve undemanding legal requirements. Furthermore, the World Bank (2004) reveals that the SME sector has been growing fast in recent years, compared to the rate of growth in the early 1990s.

### **2.3.9 The Importance of SMEs in Economic Growth**

The importance of SMEs in economic growth has made them central elements in recent policy making (Hoffman, *et al.*, 1998). SMEs are a major part of the industrial economies (Robles, *et al.*, 2007). Their survival and growth have therefore been a prominent issue. Beck *et al.*, (2005) explored the relationship between the relative size of the small and medium enterprise (SME) sector, economic growth and poverty alleviation using a sample of 45 countries, and found a strong, positive association between the importance of SMEs and GDP per capita growth. SMEs can successfully enter the global market if they can fulfil the customer needs regarding features and quality of products (Kusar, *et al.*, 2004).

Acs and Preston (1997) argued that small firms are indeed the engines of global economic growth. SMEs play an important role to promote economic development. SMEs in the beginning of business activities always face capital shortage and need technological assistance. In most countries, SMEs dominate the industrial and commercial infrastructure (Deros *et al.*, 2006). More importantly, SMEs play an important role in foreign direct investment (FDI) (Kuo *et al.*, 2003). Many

economists believe that the wealth of nations and the growth of their economies strongly dependent upon their SMEs performance (Schröder, 2006). In many developed and developing countries, SMEs are the unsung heroes that bring stability to the national economy. They help buffer the shocks that come with the boom and bust of economic cycles. SMEs also serve as the key engine behind equalizing income disparity among workers (Choi, 2003). China's recent rapid growth is also linked to the emergence of many new small firms in village townships and in coastal areas, often in new industries (Acs et al., 1997).

SMEs seem to be appropriate units to behave like network nodes because of their lean structure, adaptability to market evolution, active involvement of versatile human resources, ability to establish subcontracting relations and good technological level of their products (Mezgar et al., 2000). In the light of the above, SMEs have advantages in terms of flexibility, innovation capacity and reaction time that make them central actors in the new economy (Raymond et al., 2006). Lin (1998) estimated that SMEs make up more than 90% of all business establishments worldwide. SMEs and informal enterprises account for over 60% of GDP and over 70% of total employment in low income countries and contribute over 95% of total employment and about 70% of GDP in middle income countries (Wk, 2009).

#### **2.3.10 Factors that Make SMEs Sustainable and Competitive**

Research conducted by Ligthelm (2010) revealed a number of factors that impact SMEs sustainability and competitiveness. These include adjustment of the product offering to include new products, improving productivity, lowering labour costs,

managing pricing strategies and focusing on customer service. The author further emphasised the importance of adapting the business model to ensure continuity of the enterprise in competitive markets (Ligthelm, 2010). All of these factors are governed by entrepreneurial behaviour hence Ligthelm (2010) concludes this to be a key predictor of SMEs sustainability.

Naidoo and Urban (2010) investigated the impact of operational skills on enterprise competitiveness, a topic that is believed to be less explored. The authors are of the view that technical and industry specific competencies are pivotal to enterprise competitiveness and sustainability. The authors further stressed the potential for enterprises to develop a sustainable competitive advantage if the technical and industry specific competencies are combined with entrepreneurial skills.

Competitive firms increase their market share or access new markets (Oksanen and Rilla, 2009). Openness to international markets offers enterprises opportunities to maintain competitiveness (Hitt et al., 1998; Loyka and Powers, 2003). Growth in sales is one of the variables that serve to measure competitiveness in SMEs (Chew et al., 2008). This aspect of competitiveness can constitute a type of counter weight in the absence of profitability. Competitive enterprise will normally obtain benefits and grow at the same time. However, they may sacrifice part of their profitability in pursuit of growth or alternately, they may forego market extension, focusing on a niche or restricted market in order to increase benefits.

Enterprises that try to widen their market also tend to increase in size. In this sense, competitiveness can be used to denote a business ability to grow and thrive alongside other enterprises in the market (Han et al., 2007). Growth has been

considered a fundamental business objective that contributes to competitiveness and sustainability of business (Correa et al., 2003). Business strategy seeks to simultaneously achieve both competitiveness and growth (Pehrsson, 2003). When measuring the growth of an enterprise, the number of workers has frequently been used, as this is an uncontroversial and easily obtainable measurement (Dobbs and Hamilton, 2007).

It also seems natural that competitive enterprises show an ability to survive, and therefore it is not too far-fetched to assume that competitive enterprises tend to be more long lived. Although this is not always the case, the fact they remain in the market for a longer period of time is an indicator that these enterprises have been profitable and have provided their customers with valuable products and services. In addition, older enterprises tend to be larger and to have access to more financial resources (Levinthal, 1991). Thus, it is not unusual that a certain relationship exists between an enterprises size and its performance (Birley and Westhead, 1990).

Döckel and Ligthelm (2005) showed that business size and age impact growth and by implication sustainability. Hove and Masocha (2014) found that an increased uptake in technological marketing will increase SMEs competitiveness. Shree and Urban (2012) conducted a similar study to that of Urban and Sefalafala (2015), however the focus was on SMEs in developing countries. The authors found that SMEs require funding and a skilled labour force to enable competitiveness of the business. On the contrary, research conducted by Ramukumba (2014) found that SMEs did not view the constraints of skilled workers or competitive pricing as significant, provided the quality of the product was good. The SMEs were of the

view that a good quality product will result in repeat customers and as a result other challenges could be overcome. The author, therefore, states the need for continuous access to knowledge and information such as innovative technologies, should SMEs wish to stay competitive and sustainable (Ramukumba, 2014).

### **2.3.11 Challenges Faced by SMEs in Tanzania**

Despite their contributions to income and employment creation, Tanzania SMEs, in general, are currently faced with many problems (Nalitotela et al., 2003). In terms of determining barriers to SMEs growth, surveys by the Rural Program on Enterprise Development (RPED) found two levels of constraints facing SMEs in Tanzania: those acting as barriers to general operation and those impeding growth. Subsequently, Calcopietro et al., (1999) classify the factors hindering SMEs development in Tanzania in five categories, namely macro economic and policy environment, physical and technological infrastructure, banking and finance structure, legal and regulatory framework and market conditions. The report concludes with a list of factors impeding the development of SMEs:

- i. Lack of access to credit;
- ii. Low educational level of entrepreneurs;
- iii. Lack of managerial, marketing and production skills;
- iv. Regulatory constraints, stemming from the difficulty of obtaining legal status.

Furthermore, most of the studies conducted in Tanzania reveal regulation, bureaucratic licensing structures and external finance as major factors hindering the growth of SMEs in Tanzania (World Bank, 2004). For example, it has been

revealed that the regulatory environment in Tanzania is characterised by a myriad of controls. In addition, the taxation system is said to be complex. This study by the World Bank (2004), for example, finds a complicated and inefficient tax system to be the major constraint among most entrepreneurs surveyed. With regard to access to finance, it has been noted that most of the financial institutions in Tanzania are generally not attuned to lending money to SMEs. This is partly because most of the SMEs cannot provide collateral, which is a substantial criterion when applying for a loan. Accordingly, the institutions and associations supporting SMEs are weak; their services are quite basic and mainly focus on helping the poor to survive (Olomi, 2006). This undesirable situation has persisted for a long time, despite the existence of various programmes aimed at developing the SME sector.

### **2.3.12 General Constraints to SME Development**

Despite the potential role of SMEs to accelerated growth and job creation in developing countries, a number of bottlenecks affect their ability to realize their full potential. SME development is hampered by a number of factors, including finance, lack of managerial skills, equipment and technology, regulatory issues, and access to international markets (Gockel and Akoena, 2002). The lack of managerial know how places significant constraints on SME development. Even though SMEs tend to attract motivated managers, they can hardly compete with larger firms. The scarcity of management talent, prevalent in most countries in the region, has a magnified impact on SMEs (Gockel and Akoena, 2002).

The lack of support services or their relatively higher unit cost can hamper SMEs efforts to improve their management because consulting firms are often not

equipped with appropriate cost effective management solutions for SMEs. Besides, despite the numerous institutions providing training and advisory services, there is still a skills gap in the SME sector as a whole (Kayanula and Quartey, 2000). This is because entrepreneurs cannot afford the high cost of training and advisory services while others do not see the need to upgrade their skills due to complacency. In terms of technology, SMEs often have difficulties in gaining access to appropriate technologies and information on available techniques (Aryeetey et al., 1994).

Regulatory constraints also pose serious challenges to SME development and although wide ranging structural reforms have led to some improvements, prospects for enterprise development remain to be addressed at the firm-level. The high start-up costs for firms, including licensing and registration requirements, can impose excessive and unnecessary burdens on SMEs. The high cost of settling legal claims and excessive delays in court proceedings adversely affect SME operations. In the case of Tanzania, the cumbersome procedure for registering and commencing business are key issues often cited (WBDBR, 2006).

Previously insulated from international competition, many SMEs are now faced with greater external competition and the need to expand market share. However, their limited international marketing experience, poor quality control and product standardization, and little access to international partners continue to impede SMEs expansion into international markets (Aryeetey et al., 1994). They also lack the necessary information about foreign markets. One important problem that SMEs often face is access to capital (Lader, 1996). Lack of adequate financial resources

places significant constraints on SMEs development.

Cook and Nixson (2000) observe that, notwithstanding the recognition of the role of SMEs in the development process in many developing countries, SMEs development is always constrained by the limited availability of financial resources to meet a variety of operational and investment needs. A World Bank study found that about 90% of small enterprises surveyed stated that credit was a major constraint to new investment (Parker et al., 1995). Levy (1993) also found that there is limited access to financial resources available to smaller enterprises compared to larger organisations and the consequences for their growth and development. The role of finance has been viewed as a critical element for the development of SMEs (Cook and Nixson, 2000).

A large portion of the SME sector does not have access to adequate and appropriate forms of credit and equity or indeed to financial services more generally (Parker et al., 1995). In competing for the corporate market, formal financial institutions have structured their products to serve the needs of large corporate. A cursory analysis of survey and research results of SMEs in South Africa, for instance, reveals common reactions from SME owners interviewed. When asked what they perceive as constraints in their businesses and especially in establishing or expanding their businesses, they answered that access to funds is a major constraint. This is reflected in perception questions answered by SME owners in many surveys (Bees, 1995; Graham and Quattara, 1996; Rwingema and Karungu, 1999). This situation is not different in the case of Tanzania (WBDBR, 2006).

Requirements such as identifying a product and a market, acquiring any necessary property rights or licenses and keeping proper records are all in some sense more fundamental to running a small enterprise than finances (Green et al., 2002). Some studies have consequently shown that a large number of small enterprises fail because of non-financial reasons. Other constraints SMEs face include lack of access to appropriate technology; the existence of laws, regulations and rules that impede the development of the sector; weak institutional capacity and lack of management skills and training ( Kayanula and Quartey, 2000).

However, potential providers of finance, whether formal or informal, are unlikely to commit funds to a business which they view as not being on a sound footing, irrespective of the exact nature of the unsoundness. Lack of funds may be the immediate reason for a business failing to start or to progress, even when the more fundamental reason lies elsewhere. Finance is said to be the òglueö that holds together all the diverse aspects involved in small business start-up and development (Green et al., 2002).

### **2.3.13 RBV Theory and SMEs**

The RBV is a strategic management theory that researchers have used to analyse enterprises resources, routines and capacity, which are fundamental to enterprises operations and competitive advantage (Nisakorn et al., 2013). Edith Penrose developed the RBV in the late 1950s because of her dissatisfaction with the neoclassical economic approach to the business growth of an enterprise (Wilson, 2012). From an RBV perspective, enterprise managers include the motivation to achieve economic optimization, which drives resource management and thereby

the organizational conduct and performance (Verbeke and Tung, 2013).

Enterprise managers may obtain Ricardian-like rents (a reward for the services of fixed properties) from acquired resources (Marzo, 2014). Nisakorn et al., 2013 noted that the business incubator resources consist of the systems, the routines and the relationships embedded in a company. Managers may use BI resources to gain competitive advantages. Enterprise managers enhance a competitive advantage through identification and manipulation of incubation resources, capabilities and systems using the RBV conceptual guidelines (Degraevl, 2012).

SMEs represent a large share of total business operations in most of the developed and developing nations (Junaidu et al., 2012). Categories of the resources that managers control are physical capital resources, human capital resources and BI capital resources, depending on the characteristics. The resources in an enterprise are tangible and intangible or a combination thereof (Silver Coley et al., 2012). Enterprise resources include assets, capabilities, strategies, BI processes, information and knowledge. Enterprise tangible resources, such as plants that individuals physically use for an enterprise, are the physical capital resources (Junaidu, *et al.*, 2012).

Notable actions in enterprises where managers apply RBV include control of resources and implementation of strategies for sustainability, efficiency and profitability. The supposition in the RBV is not simply that BIs are all encompassing of resources. An assumption in RBV is that managers concentrate on using the varying critical resources to develop a sustainable competitive advantage

(Jang, 2013; Mazurenko and O'Connor, 2012). An additional assumption in RBV is that managers strongly consider divergence and fixity of a company's resources for a sustained competitive advantage. Managers of the enterprise sustain a competitive advantage by stopping competitors from copying strategies when resources are diverse and fixed (Degraevl, 2012). Ritthaisong, *et al.*, (2014) noted that when strategic resources are mobile and homogenous, the competitive advantage of a firm is not sustainable because competitors can duplicate the resources.

To develop and sustain a competitive advantage, managers of the enterprise should attach the importance to the significance of resource divergence and fixity. According to Ritthaisong, *et al.*, (2014), managers should develop exclusive enterprise resources that competitors may not duplicate. First, managers may use rare and valuable resources to produce a competitive advantage. Valuable resources are useful to managers for the efficient and effective management of the firms.

Second, resources must have certain characteristics to produce a long lasting advantage. The valuable resources are difficult to imitate, substitute and transfer from one BI to another. Small business enterprise managers use RBV for analysing SMEs resources to link external sources with performance (Kamyabi and Devi, 2011). Kamyabi and Devi, (2011) extended that the researchers used the RBV to argue that SMEs managers use external accountants as a source of professional services chiefly because of a gap in their internal resource base.

Small business leaders need support and advice because of the economic contribution and vulnerability to market imperfections (Kamyabi and Devi, 2011). According to Kamyabi and Devi, (2011) relying on external sources, SMEs managers can obtain the capabilities and knowledge they need from external service providers. Activities in which SMEs managers internally lack the necessary resources such as knowledge, strategies, skills, expertise and competence is obtainable from an external source (Kamyabi and Devi, 2011). The underlining statement in RBV is that obtaining resources from external sources is important because of smaller enterprises limited resources (Kamyabi and Devi, 2011).

Managers of SMEs operating in a competitive environment can employ external sources to integrate operational considerations within long term plans to enhance their sustainability (Kamyabi and Devi, 2011). The RBV concept is a useful application in case studies of small businesses especially in the starting phase when the enterprises are more vulnerable. To demonstrate a case for SMEs managers maximizing financial returns while at the same time proactively making progress toward Corporate Social Responsibility (CSR), researchers applied RBV (Torugsa *et al.* 2012).

The RBV of the enterprise includes the inside of the enterprise, its resources and capabilities, to show the profit and value of the BI. Theorists have applied RBV to explain differences in performance within an industry. In line with the RBV of the enterprise, differences in performance happen when well succeeded BI possess valuable resources that others do not have, allowing them to obtain a rent in its quasi monopolist form. An origin of RBV is the need to explain the competitive

performance of enterprises using enterprise resources and not an enterprises product (Armstrong, 2013). The intent from an RBV perspective is to determine how an enterprise's internal resource affects its competitive advantage. The use of RBV facilitated an explanation of strategies used by small auto business owners to survive competition (Armstrong, 2013).

#### **2.4 Critique of Literature and Research Gaps**

In the light of the above literature review, the most important points and gaps in the literature can be identified. Firstly, previous studies on business incubation have been devoted to the description of incubator facilities (Hackett and Dilts 2004). This suggests that studies on the incubation process are sparse (Todorovic and Moenter, 2010). Simply put, researchers have not fully delved into the process oriented nature of incubation (Ahmad and Ingle, 2011). This gap exists because of the paucity of both theoretically grounded models of the incubation process and a lack of valid and reliable scales (Hackett and Dilts, 2008).

Also, several studies have been done on business incubation from different perspectives mainly in developed countries thus lacking extensive geographical scope. Some have been done on technology incubators notably research findings on the role of business incubators (BIs) in helping the new technology based firms innovation capacity (Lewis 2008). Others have been undertaken by the Universities in collaboration with the National Business Incubation Association (NBIA), Ohio University, and The Southern Technology Council, in response to a request for proposals issued by the Economic Development Administration (Sherman and Chappell, 1998). In Tanzania studies carried out on the incubates perception of

services offered through incubation (Kinoti and Miemie, 2011) failed to measure specific levels of enterprise growth which this study intends to fill.

Remedios and Cornelius, (2006) observe that though the number of business incubators is on the upward trend, it is not known whether incubators achieve their goals or their exact impact on the incubate businesses. Further gaps exist in knowledge on how organizations develop in the protected incubated environment and the impact of diverse stakeholders. Research in the area of business incubation has thus not gone beyond investigating how many jobs are generated and how many businesses have graduated from incubators. These very broad based evaluators fail to provide a detailed picture of the effects of incubator programmes on the growth of SMEs (Remedios and Cornelius, 2006).

From the above literature, it is evident that new ventures are to be considered as engines of growth in an economy and it is therefore incumbent on policy makers to understand the key factors that encourage the growth of the SMEs. Yet, the literature lacks studies that show the relationship of business incubation on the growth of SMEs, especially in Tanzania. This study therefore investigated, analysed and documented the relationship of business incubation and the growth of SMEs to fill these gaps.

## **2.5 Conceptual Framework**

The conceptual framework for this study was the resource based view (RBV) theory. The RBV is a framework for management to detail and estimate the basis of enterprise's competitive advantage and effectiveness (Barney et al., 2011). The basic foundation of RBV dates back to the notable work of Penrose (1959), which

researchers have used to assess resources in studies. In accordance with the RBV concept, researchers have linked the essence of business incubation to the concept of resources and determined the choice of different uses for resources over time by administrative decisions (Penrose, 1959).

To conform to the RBV concept, resources are a source of competitive advantage when they are economically valuable, strategic, unique and difficult to replicate (Musso and Francioni, 2012). In accordance with the RBV concept, an enterprise consists of tangible and intangible resource stocks that are exclusive to the enterprises (Musso and Francioni, 2012). The heterogeneous nature of resources and the uneven distribution between competing enterprises is a cornerstone of RBV, which scholars have used to explain competitive advantage (Warnier et al., 2013). The RBV of a firm is a useful concept for scholars to note the nature of superior enterprise performance and the strategic uses of resources by enterprise managers.

Congruent to the concept of RBV of an enterprise, managers control business with heterogeneous resource endowment accountable for the variability in financial performance across enterprises (Musso and Francioni, 2012). Scholars have used RBV to develop the important framework for explaining and predicting the basis of enterprise competitive advantage and performance (Kozlenkova et al., 2014). This framework includes the close exploration of the strategies related to enterprises competitiveness and sustainability.

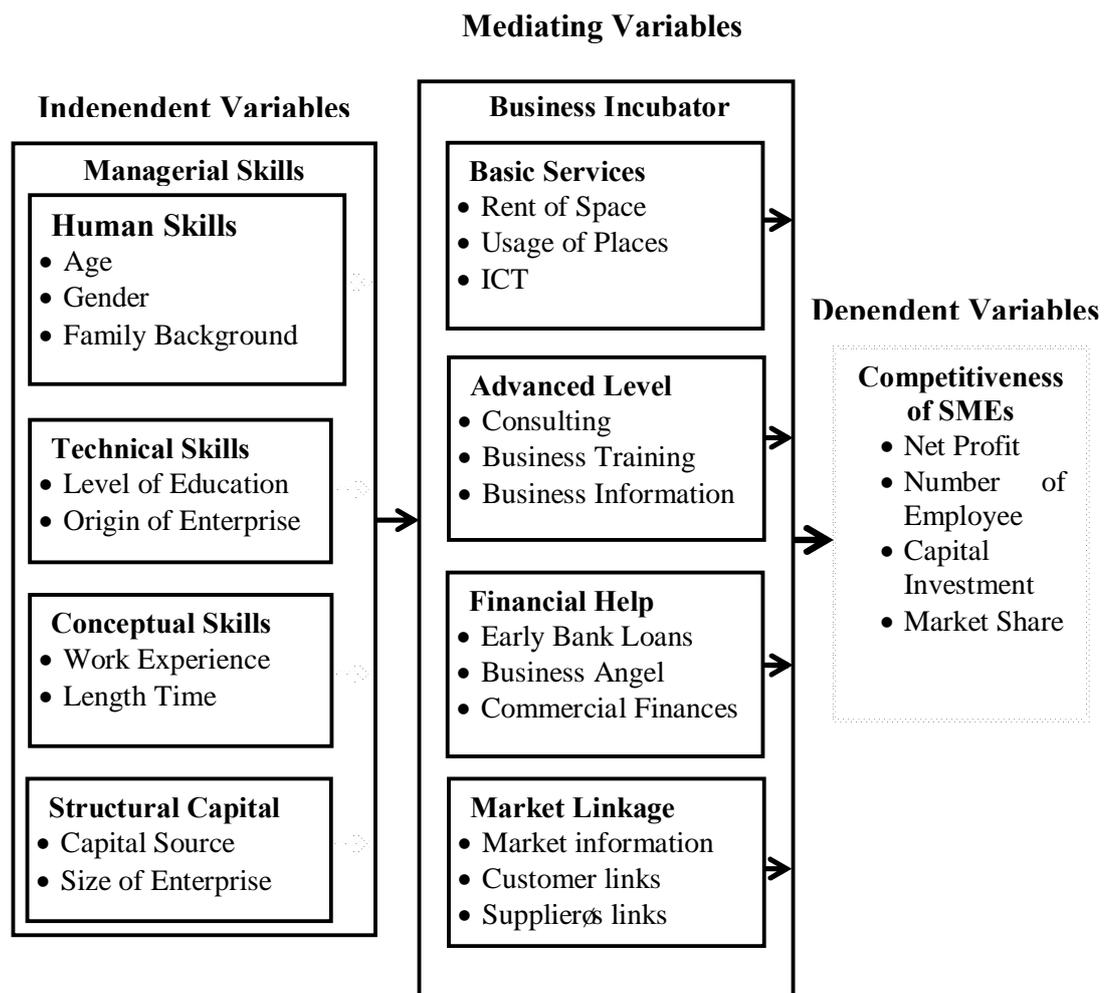
Business incubation is a collection of both tangible and intangible resources (Brahma and Chakraborty, 2011). Intangible assets are resources that have no

physical substance that business managers employ to add a value to their business entity (Yallwe and Buscemi, 2014). Intangible assets are not stand alone assets, such as a plant or equipment and they do not create value or generate growth by themselves (Yallwe and Buscemi, 2014). Empirical study results included intangible, knowledge based elements as sources of competitive advantage (Jugdev and Mathur, 2013).

BI managers use RBV to assess enterprise strengths and weaknesses in designing business strategies (Brahma and Chakraborty, 2011). The intent of the current study was to explore the application of management strategies of enterprises resources, which was why RBV was applicable. According to Chen and Chen (2013), SMEs business owners experience more resource constraints than large corporate leaders. The RBV is a basis to illustrate what strategies successful owners in SMEs to achieve business sustainability and competitiveness. Degraevl (2012) postulated that RBV is a suitable perspective for capturing strategy because of its methodological attributes, which adapt well with small business strategies. RBV is a useful tool for entrepreneurs in explaining strategies, which owners may use to create business value within a competitive market environment for sustainability.

SMEs represent a large share of total business operations in most of the developed and developing nations (Junaidu et al., 2012). Categories of the resources that managers control are physical capital resources, human capital resources, and BI capital resources, depending on the characteristics. The resources in an enterprise are tangible and intangible or a combination thereof (Silver Coley et al., 2012).

Enterprise resources include assets, capabilities, strategies, BI processes, information and knowledge. Enterprise tangible resources, such as plants that individuals physically use for an enterprise, are the physical capital resources (Junaidu et al., 2012). Activities in which SMEs managers internally lack the necessary resources such as knowledge, strategies, skills, expertise and competence are obtainable from an external source. The theoretical framework is developed in line with justification for each variable included in the model. The research will investigate how the incubation process should be done to enable the formation of competitive enterprises.



**Figure 2.1: Conceptual Model of the Study**

### 2.5.1 Age

Another important demographic characteristic that influences the growth of SMEs is the age of the entrepreneur. Unlike the entrepreneur's experience which has a positive effect on the growth of SMEs, the relationship between the age of an entrepreneur and the growth of SMEs has revealed conflicting results. For instance, some findings (Woldie et al., 2008) have supported the argument that younger managers are more likely to be successful in their enterprise than older managers because younger managers have more energy, higher aspirations and are more likely to be committed to working long hours, which is generally necessary for a business to be successful.

On the other hand, older managers are likely to have reached their final aspirations and thus growth is of little importance. A different set of studies argues that older managers are more likely to be successful in their firms than younger managers (Harada 2003). The logic is that older managers are more experienced and have gone through many challenges, which make them strong and confident. Littunen et al., (2006), for example, found that older entrepreneurs were more often found in growing enterprises. Thus, in accordance with the previous findings it can be said that whilst younger managers may have more energy to work, they lack the business experience. On the other hand, older managers may have much experience, but they lack sufficient energy to work.

Cortes, *et al.*, (2008) argued that while older proprietors are likely to be more experienced than younger ones, they may also be less inclined or less able to make their enterprises grow. Due to these conflicting messages, one argument, which is a

combination of the two, can be put forward (Storey, 1994): middle aged entrepreneurs are likely to have experience and more energy, and as such they are most likely to establish and manage a business which will grow faster than is the case for younger ones in BI.

In this regard, empirical studies have found an inverted U-shaped relationship between the entrepreneur age and the growth of SMEs. For instance, Reynolds et al., (1997) found that the founder age had an inverted, U-shaped relationship with growth rates. Similarly, Van, (2003) indicated an inverted U-shaped relationship between age and the success of small business owners in the United States, suggesting that ageing led the business owners to become uncertainty averse, thus making them no longer able to exploit opportunities.

### **2.5.2 Gender**

The gap between men and women has always existed. In many cases, the possibilities for women to participate in working life have been difficult due to women's main responsibilities for children. However, over the recent decades, some positive changes in order to diminish this gap have happened. In several countries, the law now requires the employer to take into account in their human resource policies issues such as parental leave, the right to time off for family emergencies. In terms of entrepreneurs, the majority of entrepreneurs tend to be male even though an increasing trend in the number of women entrepreneurs is more likely to be observed in the future (Torrington, et al., 2005). Female were generally less likely to be founders of new business than male (Boohene, 2008). Similarly, Kolvereid (1996) found that males had significantly higher

entrepreneurial intentions than female in most business incubation premises.

### **2.5.3 Family Background**

The knowledge required to run a business can also be learned through observing others. Building upon this proposition, researchers have argued that the children of entrepreneurs should be more likely to be self-employed than other people. Scholars have suggested various reasons as to why the children of entrepreneurs are more likely to be self-employed. These factors are generally drawn from exposure and closure mechanisms (Sørensen, 2007). The exposure mechanism focuses on how the parent's social position exposes children to experiences and expectations that have a lasting impact on their subsequent career choices (Sørensen, 2007). In the same line of thinking, scholars have argued that children exposed to self-employed parents are more likely to look at self-employment as a viable career choice than individuals without such a background (Niittykangas, *et al.*, 2005).

Indeed, having at least one self-employed parent can help modify children's aspirations and values (Bruderl *et al.*, 1992). For example, self-employed parents may serve as role models for their children (Mungai and Velamuri, 2011). This role modelling may not only lead the children to value self-employment more highly than other forms of employment but may also encourage entrepreneurial behaviour (Niittykangas *et al.*, 2005). Similarly, Niittykangas *et al.*, (2005) suggest that in self-employed families, parents may provide their children with skills, values and the confidence they need to embark on an entrepreneurial career. Some of these skills may be acquired through observing their parents or through participating in

the family business (Mungai and Velamuri, 2011).

#### **2.5.4 Education Background**

Education is one of the key components of human capital (Becker 1993). This component is the source of knowledge, skills, discipline, motivation and self-confidence (Cooper *et al.* 1994). Building upon the human capital theory, much research has been done to examine the effect of education on the performance of SMEs. The assumption lies in the notion that individuals with a higher level of education are able to manage their firms better than individuals with a lower level of education. Individuals in the former category are able to manage their firms better because education contributes towards developing the analytical and managerial capabilities needed for a firm to be successful (Shane *et al.*, 2007).

#### **2.5.5 Origin of Enterprise**

According to Smallbone, *et al.*, (1995), in small firms, where ownership and management were typically combined in one or more individuals and future goals for the business might be determined as much by personal lifestyle and family factors as by commercial considerations. Further, they concluded that one characteristic which did distinguish the best performing firms from other firms in the study was their commitment to growth. Also, they found another characteristic that did distinguish high growth firms from others was their propensity to acquire other businesses.

#### **2.5.6 Work Experience**

Like education, prior experience is also one of the most frequently examined components of human capital. Through experience, people gather information and

develop skills that are useful across different occupations (Ucbasaran et al., 2006). To date, various dimensions of prior experience have been found in the literature. But the most frequently mentioned types of experience are entrepreneurial experience, management experience and industrial experience (Unger et al., 2009). These three types of experience are considered to be important in determining the growth of SMEs. Entrepreneurial experience refers to the number of previous new ventures and the role played by entrepreneurs in these ventures. Industrial experience refers to the experience in the industry to which the current firm belongs. Management experience refers to the experience in management regardless of the industry (Bosma et al. 2004; Shane 2007).

### **2.5.7 Length Time in Operation**

Length time in operation may be associated with the learning curve. Old players most probably have learned much from their experiences than have done by new comers. Kristiansen et al., (2003) found that long time in operation was significantly linked to business success. Moussavi (2001) in his unpublished PhD thesis stated that experience on the part of the owner/manager factor contributes to the survival of businesses. In their study of new small firms, Duchesneau and Gartner (2001) found that lead entrepreneurs in successful firms were more likely to have been raised by entrepreneurial parents, to have had a broader business experience and more prior startup experience, and to believe that they had less control of their success in business than unsuccessful entrepreneurs.

They also found that lead entrepreneurs in successful firms worked long hours, had a personal investment in the firm, and were good communicators. Moreover,

successful firms were those initiated with ambitious goals, and lead entrepreneurs had a clear and broad business idea (Duchesneau and Gartner, 2003). Firms with more than one shareholder when it was set up were significantly more likely to survive (Westhead, et al., 1995). Education and prior experience in business have been seen as critical success factors for small firms (Yusuf 1995; Wijewardena and Cooray, 1996).

### **2.5.8 Capital Source**

In a study in Australia, McMahon (2001) discovered that greater dependence upon external finance associated with better business growth. In a more recent study in Indonesia, Kristiansen et al., (2003) found that financial flexibility was significantly correlated to business success. The SMEs that took advantage of family and third party investment experienced a higher level of success. According to Oswald (2003), the importance of financial resources for SMEs is obvious: it helps to retain profits, grants, loans and equity, obtained from a range of sources including self, banks, venture capitalists, Government agencies and so on (Oswald, 2003). Possible sources of financial capital include, but are not limited to the following: liquid assets, credit lines, loans, capital leases, financial management services, owner loans, credit cards and trade credits (Robb and Coleman 2009).

Vargas and Rangel (2007), argue that even though the financial resources are important for a firm to leverage performance, it was found that the development of internal capabilities has been more important than limited financial resources in order to develop competitive advantages, to compete with larger and multinational competitors. It has also been argued that putting more money into start-ups is more

costly than helping established SMEs to grow faster (Storey, 1993).

### **2.5.9 Size of Enterprise**

The size of enterprise reflects how large an enterprise is in employment terms. McMahon (2001) found that enterprise size was significantly linked to better business performance. Larger enterprises were found to have a higher level of success.

### **2.5.10 Basic Services**

Tamasy (2007) investigated the critical success factors to operate business incubator effectively. Among the factors that they noted as important was the physical infrastructure of the incubator. Specifically, they singled out on easy access to facility and equipment and common access to service space and office equipment. The support available in business incubators is often based on subsidized, and thus inexpensive, office spaces and office services, which eases the difficult start-up phase of businesses by reducing fixed costs. The spectrum of office services includes meeting rooms, telecommunication services and secretarial functions, which are available in most of the incubators. In addition, many of the business incubators provide a cafeteria as a meeting place and platform for possible synergy effects (Tamasy, 2007).

This view is collaborated by Xu (2010) who indicates that business incubators typically provide tenants with various types of physical resources or facility related services to help reduce the costs faced by start-up enterprises. In a broader classification, the services offered include affordable and flexible office space and building facilities, office equipment and shared office services. Office space is

usually charged at a rate below market rents and is flexible in terms of both leasing arrangements and the changing needs of the incubator's tenants. Services related to building facilities typically include conference or meeting rooms, cafeteria/dining room, building security and other amenities. Shared office services include secretarial, reception services, mail handling, fax and copying services and the like, which are generally not affordable or neglected by start-ups. By offering these basic office services, business incubators provide at a minimum level opportunities to reduce costs and to save time for entrepreneurs who want to start their businesses immediately.

Lalkaka (1997) makes a case for the desirable physical facilities and layout of business incubators. He argues that for a business incubator it is generally fast and economical to utilize a renovated vacant building rather than construct a new one. A state of the art building can become expensive, raising rental rates and making it difficult to break even at fewer than 85 percent occupancy. A good size is at least 2,500 square meters gross, in order to derive rental incomes for covering fixed costs. A start could be made with half this floor space and assured provision for expansion as warranted. The lab modules could be about 75 and 100 square meters each, light manufacturing spaces of about 250 square meters, and some office modules of 25 square meters.

The layout and design must be highly flexible, with good floor load capability, loading docks, together with good security, clean rooms, sanitary facilities and after hours access for tenants. Utility systems may call for individual air conditioning, good ventilation for fume hoods, fire protection, compressed air and

steam connections, and systems for disposal of hazardous waste. For biotech related activities, the incubator could provide basic shared equipment, such as autoclaves, high speed centrifuge, spectrophotometer, deep freezer, and water purification system (Lalkaka, 1997).

Importantly, all incubatees expect to be connected to the information highway. The need for a direct phone line and high speed data transfer can become expensive. Selected production reference books and business marketing journals are required. The entrepreneur doing creative work needs a pleasant but business like setting, with spaces to meet, communicate, and relax. This can be functional and modern, without extravagances (Lalkaka, 1997).

#### **2.5.11 Financial Helps**

According to Kiraka et al., (2013) the success of SMEs, especially the lower values ones that many entrepreneurs operate, is in their ability to apply finances appropriately to support innovative initiatives that can grant them a competitive edge in the market, thereby spurring their growth. In a study of credit and employment growth among SMEs in Kenya, Moyi (2013) alleged that policy makers in Kenya expect SMEs to provide the bulk of new jobs created in the economy yet these enterprises face significant credit constraints. SMEs are identified as being registered, operating from legitimate business premises and employing over 10 workers and having, at least, secondary level education with some previous experience as employees. This segment is constrained by lack of access to finance for various reasons, including having no land/property title deeds to be used as collateral for large loans (Stevenson and St-Onge, 2005).

### 2.5.12 Market Linkages

SMEs in any country do contribute to economic growth. However, there are challenges and opportunities that they face notably; linkage with multinational companies, networks, diversification, enabling environment and franchising opportunities (Shaw and Conway, 2000). Network involves a group of people who exchange information, experience and contacts for professional, business or social purposes. Networks are important during the establishment, development and growth of SMEs. The network may include family members, or even friends or professionals.

Networks are of growing importance to SMEs in any economy. Africans being notoriously social, networking becomes a vital tool for success of SMEs; it becomes like an inborn trait or an opportunity that comes by natural flow Shaw and Conway (2000). Brush (2006) identified that social networks impact on the opportunity recognition process they established that entrepreneurs networks and the way that the contacts that entrepreneurs have may affect the recognition and enterprise creation process.

Bontis (2001) carried out a study on intellectual capital (IC) disclosures in Canadian corporations; he argues that the relationship between structural capital and human capital can be located within social network. The social characteristics interconnect each individual in an organization and thus enhancing enterprise growth. He states that these outlets are the owners of the tacit knowledge within their social networks. Among different components of IC, structural capital is the most difficult as it is related to other capital in terms of definition. He further

concluded that structural capital includes technological factors and technical competencies. Hsu (2006) in his study concluded that the main focus of structural capital is to embrace a sound foundation, with views from organizational capital, process capital, even innovation capital. This study hypothesizes that structural capital is positively associated with the growth of SMEs.

According to Tulus (2005) in an Indonesian perspective, he observes that clustering plays an important role in the growth of SMEs and Governments should support it. Hence, close proximity is crucial to enterprise. From the context of Kenya, small enterprises like *õmitumbaö* (selling of second hand clothes); we find the business clustered in one place. This is aimed at creating a closely-knit network that ultimately increases the inflow of customers. Social networks are a rich source of information that permits the individual to identify different combinations of the means-ends deriving in the creation of new products or services for a particular market (Christensen and Peterson, 1990). A social network provides certain benefits that are shared among its members such as communication of information; funds (Shane et al, 1991); exchange content, goods and services; and a special characteristic or attribute that people expect from one another like advice and counseling.

According to Muteti (2005), forging market linkages between enterprises and foreign multinational corporations can hasten MSE development in developing countries like Kenya. Linkages can be classified as either forward or backward. For instance, multinationals may forge forward linkages with locals firms. One such linkage would be marketing outlets where multinationals outsource the distribution

of brand new products. Franchising, according to Jim (2007) refers to an arrangement whereby a party (franchisor), who has developed a way of running a business system successfully, licenses to another the rights to operate that system using either his/her trademark or name or/and other rights. The rationale behind franchising lies in acquiring support in the area of training, which includes building personnel, management and overall opening up of new horizons in the market place.

In Kenyan perspective, the business environment (though not all that conducive due to heavy cost of investment and production, partly because of heavy taxation and energy issues) has enabled a number of macro and micro enterprises to rise. More and more micro enterprises are seeking support from the macro ones more than ever before. This has partly facilitated to their rapid growth (Muteti, 2005). Micro and small enterprises have potentiality of boosting a country's economy. Although they are faced by many challenges, they still have opportunities to grow. These include linkage with multinational companies, networks with other businesses, diversification of market and products, enabling environment and franchising opportunities. Such opportunities, if well utilized by the small enterprises can turn round their future in many developing countries (Muteti, 2005).

#### **2.5.13 Competitiveness OF SMES**

In this study, the dependent variable is the increased competitiveness of SMEs, which refers to a business's ability to sustain its long term performance better than its competitors in the market, as indicated by profitability, market share, number of

employee capital investment. Business competitiveness can be measured using only financial indicators such as profit, market share, sales, and growth rate (Singh et al., 2008 Lau and Chan, 2002).

However, there are many other indicators of competitiveness, depending on the nature of the study, industry and the size of the business, such as net worth and sales volume (Segal et al., 2010). In a survey of independent Greek SMEs, business competitiveness was measured using profitability, sales growth, sales volume and market share as indicators of business success (Salavou and Avlonitis, 2008). Similarly, *et al.*, (2007) measured competitiveness of the business by comparing the actual performance of the business sales, market share, profit, growth, demand and customer loyalty with the forecast.

In a survey of Chinese banking industry (Li and Wang, 2007), business competitiveness was measured using eight business criteria: return on total assets, return on net assets, return on sales, asset liability ratio, total asset turnover, price cost ratio, loan losses and return on equity. An empirical study of furniture SMEs in Spain (Guzman et al., 2012) concluded that competitiveness of SMEs can be measured by return on investment, increase in sales, number of employee, profits and market share. Recognizing the limitations of relying solely on either the financial or non-financial measures, a survey of five ownerø managers of SMEs established that most ownerø managers of the modern SMEs use a hybrid approach in measuring competitiveness due to their concerns on meeting the financial as well as non-financial returns. Such a combination is used to measure competitiveness against predetermined goals and time. Financial measures include

profits and sales turnover while non-financial measures are the long-term growth rate and market share of the business (Chong, 2008). Based on this anecdotal and empirical evidence, it can be concluded that most SMEs use profitability, market share, number of employee, growth rate capital investment as measures of competitiveness.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Research methodology refers to the method by which data are gathered for a research project. It is the blueprint for the collection, measurement and analysis of data in order to achieve the objectives of a research project. Research methodology is important in a research work because it specifies the sampling design. Here the researcher explicitly defines the target population and the sampling method used. The researcher also provides the motivation for choosing a specific sampling method.

Additionally, the researcher identifies the data collection method used. This could be self-administered questionnaires, telephone interviews, and the rationale for choosing a particular data collection method. Furthermore, the researcher identifies the methods of data analysis, describes data handling, statistical tests, computer programs and other technical information, and the rationale for using a particular method. Finally, the researcher focuses on the limitations of the research. The researcher identifies significant methodology or implementation problems such as sampling errors, response and non-response errors and the constraints of cost and time (Cooper and Schindler, 2003, Wheather and Cook, 2000).

This chapter will attempt to explain the survey at hand in terms of the study area, the study unit and the population. Furthermore, the chapter highlights the organisation and design of the questionnaire as well as the methods of data collection and data analysis. The data collection instrument employed in the

investigation, the administration of the instrument as well as their reliability and validity will also be described. Finally, the chapter will examine the different statistical tests used to analyse the gathered data, the reliability and the validity of the results as well as the limitations in the collection of the data.

### **3.2 Research Philosophy**

As Jennings et al (2005) describe, either explicitly or implicitly, researchers base their work on a series of philosophical assumptions regarding ontology, epistemology, and human nature, which have methodological consequences. Resource base view about enterprises has generally been undertaken from a positivist perspective. Positivism can be explained as, an epistemological position that advocates the application of the methods of the natural sciences to the study of social reality and beyond (Bryman, 2008). This epistemological approach involves the use of hypotheses, large surveys, numbers and quantitative data, and the verification and falsification of theories (Thorpe, 2011).

Ucbasaran et al (2006) and Davidsson and Honig (2003), for instance, have all considered the statistical relationships between human capital assets and business performance using large data sets. Quantitative methods can be appropriate to investigate correlative relationships when there are a number of variables involved (Davidsson, 2008). However, qualitative research can be more appropriate to study the nature of phenomena in detail (Davidsson, 2008). Phan (2004) has argued that there is a need to develop greater diversity in the range of methods used to better understand entrepreneurship. Similarly, Bygrave (2007), from an American perspective, points out the lack of qualitative research published in leading

journals: 95% of the entrepreneurship articles published in nine *Academy of Management* journals used statistical analysis, only 10 percent were based on interviews, and less than 1 percent on observation; it's extremely difficult to get qualitative research published in *Academy of Management* journals. Interpretivism, however, has become gradually more accepted in entrepreneurship research, particularly in the UK and Europe (Jennings et al, 2005).

Interpretivism may be defined as, "an epistemological position that requires the social scientist to grasp the subjective meaning of social action" (Bryman, 2008). A key difference to the positivist position is that interpretive researchers believe that social scientific phenomena are fundamentally different to natural scientific phenomena, and thus require different approaches to researching them (Bryman, 2008). For Bryman, "The clash (between positivism and interpretivism) reflects a division between an emphasis on the explanation of human behaviour that is the chief ingredient of the positivist approach to the social sciences and the understanding of human behaviour. It is this aim to understand social action from the perspective of social actors that separates interpretivism from positivism. Interpretivism involves the asking of questions, studying small samples, words and numbers, triangulation and theory generation (Thorpe, 2011). It relies on an ontological understanding of the world that there are many truths, rather than a single truth and that these truths are constructed by social actors (Thorpe, 2011).

The aim of this research is to understand the perspectives of the participants about how they have developed the knowledge and skills relevant to starting and building their businesses. This should lead to a clearer understanding of the RBV which

underpin quantitative human capital studies. The study adopts the use of semi-structured interviews, which can lead the qualitative researcher into novel and unexpected areas raised by the interviewees (Berglund, 2007). The use of semi-structured interviews enables the researcher both to identify key variables in business incubation, human capital development and understand them from the participant's own viewpoints.

### **3.3 Research Design Strategy**

By taking the limitations and benefits of different research strategies into account a survey strategy was found most suitable to carry out the research objects. A survey strategy is typically associated with a deductive research approach which also is the case with this study (Saunders et al., 2007). Such a strategy is suitable where the population or a representative sample of the population is available to be studied. If applicable, surveys allow the collection of a large amount of data from a sizeable population in a highly economical way (Saunders et al., 2007). This strategy also provided a larger control over the research process and made it possible to generate findings which are representative of the whole population of SMEs companies. The availability of a representative population size was also a reason behind the choice for a survey strategy.

Research design forms the framework or blueprint of the research and deals with at least four issues, namely: what questions to study, what data is relevant, what data to collect and how to analyse the results (Malhotra 2006; Marczyk et al., 2005). There are various research designs and the application of these depends on the research objectives, the available data sources, the urgency of the decisions and the

costs of obtaining the data (Zikmund, 2003; Baker, 2003). In terms of the methodological approach chosen, this study used a cross-sectional design, with data being collected via the survey method (Marczyk et al., 2005). For answering the research question, a two stage research procedure was employed.

The first stage of the research comprehended interviews with pivotal people involved or related to the business incubation system and the second stage was a self-administered questionnaire survey. Such a two stage approach made it possible to use the qualitative data gathered from the in-depth interviews for improving the quantitative data gathering through the survey of the enterprises. The results of the interviews also helped develop expectations regarding the needs of business incubation. This research design also made it possible to reach a sufficient number of the target group economically and also allowed making better inferences on the collected data (Thomas, 2003).

Surveying both incubated and non-incubated enterprises would allow the study to evaluate how the incubation system covers the (perceived) needs of different enterprises for business incubation programme and make a comparison between these two groups. Such a comparison of incubated and non-incubated companies would provide valuable information on the differences between these two enterprise groups. It would also make it possible to evaluate the perceived value of business incubation for the future development of non-incubated enterprises and the match between the received services from business incubation and the needs of incubated enterprises which can be seen as a sign of the quality and availability of business incubation to incubated enterprises. Furthermore, surveying off-incubator

enterprises would allow evaluations of the needs of incubated enterprises who did not reside in the business incubation premises.

### **3.4 Unit of Analysis**

Cooper and Schindler (2011) define a unit of analysis as the entity being studied and which the researcher decides how to analyse data of the study. For instance, people, groups or individuals could be a unit of analysis in a study. In this study, this unit of analysis comprised a group of individuals. These individuals included business incubation managers, SMEs and workers in the study areas. Individual characteristics such as the number of years of SMEs in the incubation programme, education, gender, age etc were categorised in the research which outlines a picture of the groups of individuals that were being studied. Hence, this study was based on the business incubators operating in study areas (Dar es Salaam, Mbeya and Arusha) and SMEs on the exit stage of graduation.

### **3.5 Sampling Methods**

In order to obtain reliable data about the impact of business incubation in promoting the competitiveness of SMEs, a non-random sample from the population had to be selected. Burns and Burns (2008) define a sample as a portion of the population which represents the study objects. Singh (2007) provides two distinctions of the sampling approach that should be used to select the respondents, namely: probability based samples and non-probability based or purposive samples. Each approach has its advantages and disadvantages in terms of accuracy and cost effectiveness (Singh, 2007). This study adopted the non-probability method, also known as purposeful quota sampling. This approach is commonly

used in Tanzania, due to the lack of an accurate and up-to-date sampling frame (Nchimbi, 2002).

In addition to the above reason, this approach was adopted because it is simpler and less expensive than the probability sampling approach. Baker (2003) argues: "where resources are limited as is the case of much student research, probabilistic methods may be unrealistic". Hence, the need for simpler and less expensive sampling procedures is largely met by judgmental approaches in which the sample is selected for a particular purpose. With this approach, efforts were therefore made to approach the respondents who fitted the objectives of the current study. As recommended by Baker (2003), the study sample should comprise persons who possess the information that the researcher intends to gather. In this study, researcher aimed to investigate the impact of business incubation in promoting the competitiveness of SMEs incubated and none incubated, so the respondents selected had to be the owner or managers of the firm (or one of them). Additionally, in order to reduce bias, the centres known for their BIs in those three regions were identified with the help of the Small Industry Development Organisation (SIDO).

### **3.6 Sample Size**

A sample should be a relatively true representation of the target population in terms of the respondents. Although there are no general rules, generally a sample size larger than 30 and less than 500 are appropriate for most research studies (Robert-Lombard, 2006). Hair et al., (2008) argued that in determining the sample size, the researcher must consider how precise the estimates should be and how much time

and money are available to collect the required data. This is because data collection is generally one of the most expensive components of a research study. The sample size can be calculated using the RAOSOFT sample size calculator. The RAOSOFT sample size calculator gives a recommended minimum sample size for a particular target population. RAOSOFT takes into consideration four factors in determining the sample size which includes the margin of error, the confidence level, the population and the response distribution.

### **3.6.1 Margin of Error**

The margin of error can also be referred to as the confidence interval. The margin of error measures the precision with which an estimate from a single sample approximates the population value. In business research, the margin of error should range from three percent (3%) to seven percent (7%). However, five percent (5%) is the most commonly accepted margin of error in business research.

### **3.6.2 Confidence Level**

The confidence level is the estimated probability that a population estimate lies within a given margin of error. It is the amount of uncertainty that the researcher can tolerate. In business research, the confidence interval varies from ninety percent (90%) to one hundred percent (100%). However, ninety-five percent (95%) is the most commonly accepted confidence level in business research.

### **3.6.3 Population**

This refers to the total group of people or elements from which information is to be gathered when conducting primary research to solve the research problem (Cant et

al., 2003). Therefore, the population in this study refers to one hundred and fifty SMEs operating their enterprises in Arusha, Dar es Salaam and Mbeya region.

### 3.6.4 Response Distribution

One of the important requirements of this analysis is that it requires a sample whose size should preferably be 100 or larger (Hair et al., 2006; Malhotra, 2006). For the purposes of this research, minimum recommended sample size of 150 SMEs (incubated and non-incubated) was obtained, the margin of error of five percent (5%) the confidence level of ninety-five percent (95%) with a response distribution of fifty percent (50%). Using Raosoft (2004) the sample size was calculated to be 109 SMEs. However, 150 questionnaires were distributed to SMEs in order to cover non-responses and missing value or data. The distribution of the sample across the three regions is shown in Table 3.1.

**Table 3.1: Distribution of the Sample**

| S/N          | Region        | No. of Respondents | % of Respondents |
|--------------|---------------|--------------------|------------------|
| 1            | Dar es Salaam | 50                 | 33               |
| 2            | Arusha        | 60                 | 40               |
| 3            | Mbeya         | 40                 | 27               |
| <b>Total</b> |               | <b>150</b>         | <b>100</b>       |

**Source:** researcher

### 3.7 Pre -Testing

Pre-testing refers to the testing of the questionnaire on a small sample of respondents to identify and eliminate potential questions. All the aspects of the questionnaire should be tested, including wording sequence and layout. The respondents in the protest should be similar to those who will be included in the

actual survey (Roberts, 2002). Pre-testing is critical for identifying questionnaire problems. These can occur for both respondents and interviewers regarding question content, skip patterns, or formatting. Problems with question content include confusion with the overall meaning of the question, as well as misinterpretation of individual terms or concepts. Problems with how to skip or navigate from question to question may result in missing data and frustration for both interviewers and respondents. Questionnaire formatting concerns are particularly relevant to self-administered questionnaires, and if unaddressed may lead to the loss of vital information (Snijkers, 2002).

The questionnaire was pre-tested through twenty respondents from TEMDO and SIDO business incubator. Pre-testing is essential if the researcher is satisfied that the questionnaire being developed will perform its various functions in the interview situation. Furthermore, the data collected will be relevant and as accurate as possible, the target respondents will participate and co-operate as fully as possible and the collection and analysis of data will proceed smoothly (Cooper and Schindler, 2003). Pre-testing was used in the study to identify flaws in the questionnaire and to determine the time required by a respondent to complete the questionnaire. Furthermore, in the study at hand pre-testing, the questionnaire was to test its face and content validity and to identify and rectify problem areas. After pre-testing the instrument, it was refined for the data to be collected.

### **3.8 Reliability and Validity**

The two concepts: reliability and validity are very important to take into consideration when carrying out a qualitative research since they help to determine

the objectivity of the research. Reliability and validity could be seen as two different measurement instruments that illustrate the level of trustworthiness and credibility of a research. Bryman and Bell (2007) explain that reliability and validity are separated into internal and external concepts.

Mainly, internal validity is concerned with the congruence of the research findings with the reality. Also, it deals with the degree to which the researcher observes and measures what is supposed to be measured. On the whole, to boost the internal validity of the research data and instruments, the researcher might apply the following six methods recommended by Merriam (2008): triangulation, member checks, long term observation at research site, peer examination, participatory or collaborative modes of research and researcher's bias.

External reliability means to what extent a research can be completed again with results comparable to the original study. It might be difficult to achieve high external reliability since the scene and the setting is likely to change from the time of the original research to the time of a second one. However, a strategy mentioned by Bryman and Bell (2007) is to adopt a similar role as taken on by the original researcher in order to be able to replicate the initial research. Subsequently, to achieve high reliability in this thesis, this chapter describes in detail the process of gathering data as well as how the interviews are performed. In addition, all interview questions are distributed in Appendix 1. This detailed description increases the ability for other researchers to replicate this study under the same conditions with comparable results.

Internal validity refers to what degree the researchers are able to agree and come to same conclusions i.e. if there is a good match between their observations and theoretical thoughts that they expand throughout the research (Bryman and Bell, 2007). Internal validity is usually perceived as strength within qualitative research since the researchers tend to observe the social setting over a long period of time which generally results in an excellent correspondence between observations and concepts (Bryman and Bell, 2007). External validity, on the other hand, can be seen as a problem within qualitative research, since it refers to the extent that findings can be applied in other social settings and qualitative researchers generally make use of small samples and case studies (Bryman and Bell, 2007).

### **3.9 Study Area**

As mentioned earlier in Chapter three, the study was conducted in three cities namely Arusha, Mbeya and Dar es Salaam. The reasons for choosing these regions are as follows. Dar es Salaam was selected because it is the largest commercial city in Tanzania, with more than four million people and most of the SMEs in this region (URT 2012). Arusha and Mbeya were chosen because they are regarded as second and third to Dar es Salaam in commercial activities. Also, these regions have been selected purposely because they are among the major industrial regions in Tanzania, where business incubators are located. The targeted incubators in these areas were the ones hosted by Tanzania Engineering and Manufacturing Designs Organisation (TEMDO), The Tanzania Commission for Science and Technology (COSTECH), Small Industries Development Organisation (SIDO), and Private institutions.

### **3.9.1 Dar es Salaam**

Dar es Salaam City comprises with five districts; Ilala, Temeke, Kinondoni, Ubungo, and Kigamboni. Dar es Salaam is the largest commercial city of Tanzania. This city is located in a quiet bay off the coast of the Indian Ocean and is home to over four million people (URT 2012). Being the prominent region, Dar es Salaam is likely to be a place where various business matters are undertaken seriously. For instance, it is documented that high concentrations of economic and social activities, skilled labour and capital are likely to be found in this region (Ishengoma, 2005).

Major economic activities carried out in this city include manufacturing, trade, financial services, education and training, transportation and construction (URT, 2008). Furthermore, skilled workers are likely to locate themselves in Dar es Salaam, where it is relatively easy for them to secure jobs (Ishengoma, 2005). Accordingly, compared to other regions, there is a large market for consumer goods in Dar es Salaam. These qualities have led to the city attracting many SMEs.

### **3.9.2 Arusha**

Arusha city is found in Arusha Region, which is in northern Tanzania and lies at the foot of Mount Meru. This city is surrounded by the most famous national parks and landscapes. The city, which is also the administrative centre of Arusha Region and the East African Community, has an estimated population of 1.6 million people (URT, 2012). It is a fast growing city, which is conveniently linked to Dar es Salaam, Moshi, and Nairobi by road, train and air services. In fact, this city is regarded as second only to Dar es Salaam in terms of volume of commercial

activities.

The city enjoys the best climate in the country, with most months being cool. Arusha Region has a vibrant and growing economy. The city is a gateway to the most popular tourist attractions in the country, such as Serengeti, Lake Manyara, Ngorongoro national parks as well as Mount Kilimanjaro. Arusha as a region generates substantial revenues from minerals, cash crops (coffee) and food crops (maize, wheat, beans and vegetables) and encompasses five districts; Monduli, Arumeru, Arusha, Karatu, Ngorongoro and Loliondo.

### **3.9.3 Mbeya**

Mbeya city is one of the Tanzanian's 29 administrative regions. It is bordered to the northwest by Tabora Region, to the northeast by Singida Region, to the East by Iringa Region, to the South by Zambia and Malawi and to the West by Rukwa Region. Mbeya city is occupied by several different ethnic groups including the Nyakyusa, Ndali, Nyiha, Nyamwanga, Safwa, Malila, Vwanji (Wanji), Bungu, Sangu, Wanda and Sichela. According to the 2012 Tanzania National Census, the population of the Mbeya city was 2.7 million. Mbeya city is administratively divided into 8 districts; Chunya, Mbarali, Mbozi, Rungwe, Kyela, Ileje, Mbeya Urban and Mbeya Rural.

### **3.10 Data Gathering Technique**

This section focuses on the various methods that were used in the actual collection and cleaning of data. The data was gathered through the use of self-administered questionnaires which were distributed by the researcher with the aid of one field

worker. Questionnaires were distributed at the places of business of the SMEs. A similar method was used by Watson (2007) in a research on the performance of SMEs in Kenya

### **3.10.1 Primary and Secondary Data**

When a researcher collects a first-hand data collected for analysis is known as primary data (Burns and Burns, 2008; Brynard et al., 2014). Secondary data refers to the data obtained from already published sources such as databases, any published information and dictionaries (Remenyi et al., 1998; Brynard et al., 2014). In this study, the researcher utilised journals, books, previous theses and Government reports, both online and in paper format, as sources of secondary data; questionnaires and interviews as sources of primary data. The researcher made use of original and existing sources of information in both primary and secondary data.

### **3.10.2 Personal Interviews**

A personal interview is a two way conversation initiated by an interviewer to obtain information from a participant. The differences in the roles of the interviewer and participant are pronounced. They are generally strangers to each other; the interviewer generally controls the topics and patterns of discussion. The greatest value lies in the depth of information and detail that can be secured. It far exceeds the information secured from telephone and self-administered studies via intercepts and surveys. The interviewer can also do more things to improve the quality of information than with any other method. Interviewers also have more control than with other kinds of interviews. They can pre-screen to ensure the correct participant is replying and they can set up and control interviewing

conditions. Interviewers also can adjust the language of the interview as they observe the problems and effects the interview is having on the participant. An interviewer can explain what kind of answer is sought, how complete it should be, and in what terms it should be expressed (Cooper and Schindler, 2003).

Personal interviews were used in this study as they ensured good cooperation from respondents and increased the quantity of data collected due to their personal nature and the limited effort required of respondents. It enabled the researcher to answer questions about the survey, probe for answers, use follow-up questions and gather information by observation. Due to the difference in literacy levels in the population the researcher was able to reach all respondents regardless of their education level; hence quality data was obtained as the researcher clarified problematic aspects (Tustin et al., 2005).

### **3.10.3 Missing Values**

The treatment of missing responses poses problems in business research particularly if the proportion of missing values is more than ten percent (10%). The researcher is often faced with a dilemma on how to treat missing values; that is whether to include or exclude responses from respondents with a large proportion of missing responses. The strategy to be adopted to solve missing values is influenced by factors such as the available sample size and the size of the important groups in the sample. Graham (2009) proposed three basic approaches to apply when dealing with missing values. Firstly, to leave the data as it is with the missing values, secondly to screen out all incomplete questionnaires and thirdly to fill in the incomplete questionnaires with average responses obtained from responses

provided by other respondents. The approach to missing values is controlled by the Statistical Package for Social Sciences (SPSS). The SPSS will either use list-wise deletion or pair-wise deletion for treating missing values.

#### **3.10.4 List-Wise Deletion**

For list-wise deletion, SPSS will not include cases that have missing values on the variable(s) under analysis. If multiple variables are being analysed, list-wise deletion removes cases (subjects) if there is a missing value on any of the variables. List-wise deletion is often viewed as an extreme option, which may result in small sample sizes. However, deleting large amounts of data is undesirable because data collection is costly and time consuming. In addition, list-wise deletion results in unnecessary loss of data as it removes all data from subjects who may have answered some of the questions, but not others (Graham, 2009).

#### **3.10.5 Pair-Wise Deletion**

Using pair-wise deletion, SPSS will include all available data. Unlike in list-wise deletion which removes cases that have missing values on any of the variables under analysis, pair-wise deletion only removes the specific missing values from the analysis. In other words, all available data is included. However, another option is to replace the missing values through imputation. This could be done by mean substitution or regression substitution. Mean substitution replaces the missing value with the mean of the variable. Regression substitution uses regression analysis to replace the missing value. Regression analysis is designed to predict one variable based upon another variable, so it can be used to predict the missing value based on the subject's answer to another variable. For the purpose of this

research study, the pair-wise deletion method was used as there were only four cases of missing values.

### **3.11 Data Analysis Procedure**

Data analysis involves the reduction of accumulated data to a manageable size, developing summaries, looking for patterns and applying statistical techniques. It also includes the interpretation of research findings in the light of the research questions and determines if the results are consistent with the research questions and theories (Cooper and Schindler, 2003).

#### **3.11.1 Editing of Data**

Responses from each item of the questionnaire were edited. According to Cooper and Schindler (2003), editing involves a thorough and critical examination of the completed questionnaire, in terms of compliance with the criteria for collecting meaningful data, and in order to deal with questionnaires not duly completed. Editing of data detects errors and omissions, corrects them where possible and certifies that the minimum data quality standards have been achieved. Therefore, the primary purpose of editing is to guarantee that data are accurate, consistent with the intent of the questions, uniformly entered, complete and arranged to simplify coding and tabulation. Data collected from the respondents were edited to achieve these objectives. The completed questionnaires were edited and organized to simplify the process of coding.

#### **3.11.2 Coding of Data**

All the questions in the questionnaire were coded for easy classification. Coding involves assigning numbers or other symbols to answers so that responses can be

grouped into a limited number of classes and categories. The classification of data into limited categories is necessary for efficient analysis. Coding assists the researcher to reduce a large number of replies into a few categories containing the critical information required for analysis. Pre-coding is particularly helpful for data entry because it makes the intermediate step of completing a coding sheet unnecessary. Data can be accessed directly from the questionnaire (Cooper and Schindler, 2003).

### **3.11.3 Data Analysis**

In a quantitative research, data analysis refers to the process of breaking down the collected data into constituent parts in order to answer the research questions (Terre et al., 2002). It involves reducing the accumulated data into manageable sizes, developing summaries, looking for patterns and applying statistical techniques. Gerber-Nel et al., (2005) point out that the purpose of analytic methods is to convert data into information needed to make decisions. The choice of the methods of statistical analysis depends on the type of question to be answered, the number of variables, and the scale of measurement. The type of question the researcher is attempting to answer is a consideration in the choice of the statistical technique.

Based on this factor, the researcher may be concerned about the central tendency of a variable or the distribution of that variable. The number of variables is also considered to determine whether the statistical techniques applied should be the univariate data analysis, the bivariate data analysis or the multivariate data analysis. The scale of measurement on which the data are based on the type of measurement reflected in the data determines the permissible statistical technique

and whether the appropriate empirical operation may be performed.

#### **3.11.4 Descriptive Statistics**

Descriptive statistics is the method used to describe characteristics of a population or a sample. It is therefore aimed at describing the data by investigating the distribution of scores for each variable and by determining whether the scores on different variables are related to each other (Terre et al., 2002). The descriptive analysis allows the researcher to present data in a manner that is easily interpretable, in this study frequency tables as well as graphs were used.

Cooper and Schindler (2008) assert that descriptive statistics are used to point out the measures of central tendency (mean, median and mode), measures of dispersion (variance, standard deviation and range) as well as shape (skewness and kurtosis). In this study, two important measures were considered, the mean and standard deviations. The arithmetic average or mean ( $\bar{X}$ ) comprises a point which coincides with the sum of the scores divided by the number of scores. The standard deviation shows the variations about the average of the data. Calculating the standard deviation of the theoretical distribution of the sample reflect how far the sample means could be from the population mean.

#### **3.11.5 Inferential Statistics**

Inferential statistics is the method used to draw conclusions about the population itself. While descriptive analysis allows the researcher to generalise from the sample of the population, the inferential analysis allows the researcher to draw conclusions about the population on the basis of data obtained from samples (Terre

et al., 2002). Based on the distribution of the descriptive statistics obtained from the study, analytical techniques were used to perform the inferential analysis. These included analysis of variance (ANOVA), T-tests, correlation and regression analysis. The T-test and ANOVA were used to test the differences in the results and the Pearson correlation and regression analysis was used to test the associations and relationships.

### **3.11.6 Statistical Package for Social Sciences (SPSS)**

Data from the respondents were verified, compiled, coded and summarized before analysing them by using Statistical Package for Social Sciences (SPSS) Windows Software Version 20. For quantitative data, descriptive and inferential statistics were applied. In descriptive statistics, frequencies, percentages, means, standard deviation, standard error and range were employed. In inferential statistics, t-test method and regression models were used. The t-test method was used to test whether there was any significant difference before and after clients received the loan ( $p < 0.05$ ).

From the conceptual frame work, the statistical model was developed. In this case competitiveness of SMEs being the dependent variable takes the variable (Y). The coefficients of the independent variables  $x_1, x_2, \dots, x_n$  are significant in showing the rate of how the independent affect the dependent variable. Data was analysed using the following statistical models:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \epsilon$$

Multiple linear regression of the model for the study is given by;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \dots$$

Where:

$Y$  = Competitiveness of SMEs

$\theta_0$  = Constant of the equation

$\theta_1 - \theta_n$  = Regression Coefficients (The estimated change in the dependent variable for a unit change of the independent variable)

$X_1 - X_n$  = Independent variables ( $X_1$  = Human Skills,  $X_2$  = Technical Skills,  $X_3$  = Conceptual Skills,  $X_4$  = Structural Capital),

$\epsilon$  = Error term

T-statistics and their respective P-values were computed for all the coefficients and used to determine whether the coefficients of the independent variables were significant or not. The insignificant variables were dropped on a further regression analysis to determine the optimal model. Analysis of data using regression model has been used previously by Aduda (2011) in a study which investigated the relationship between executive compensation and firm competitiveness in business incubation. Also Ngugi (2001) used a regression analysis in a study on the empirical analysis of interest rates spread to SMEs while Khawaja and Mulesh (2007) used regression analysis to identify the determinants of performance of SMEs in Pakistan.

The study conceptual framework also indicated that business incubator as mediating variable and hence the mediation effect of the business incubator was analysed and tested. To test for Mediation, a bivariate regression was carried out on the effect of each independent variable on growth followed by regression for each independent variable including the mediating variable.

$Y = \beta_0 + \beta_1 X_i + e_i$  . Bivariate regression analysis

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 Z + \beta_6 X_i Z + e_i$  . Regression analysis including the mediating variable

Where

Y = Competitiveness of SMEs

$\beta_0$  = Constant of the equation

$\beta_1$  to  $\beta_4$  = Regression Coefficient for variables  $X_1, X_2, X_3, X_4$

$\beta_5$  = Regression Coefficient for moderating variables  $X_i$

$e_i$  = Error term

Z = Moderating Variable ( $X_5$  = Basic Services,  $X_6$  = Advanced Level Services,  $X_7$  = Financial Help,  $X_8$  = Market Linkages)

$X_i * Z$  = Interaction effect between the independent and the moderator variable

The mediating effect was tested by using calculating the R<sup>2</sup> change and testing the P-value of the change. Usually a mediating variable has a direct or indirect influence on the relationship between independent and dependent variable (Mugenda and Mugenda 2012). This model conclusively showed how the incubation process should be done to enable the formation of competitive enterprises in Tanzania.

### 3.12 Validity and Reliability of the Results

A sample survey, even when properly conducted, can yield only estimates, but not exact values. A sample survey is a survey in which a sample is selected to be representative of the whole population. The major types of errors in research are sampling, response and non-response errors (Loubser, 1999). Each of these errors

is discussed in more detail below.

### **3.12.1 Sampling Errors**

Sampling errors arise from estimating a population characteristic by looking at only one portion of the population rather than the entire population. It refers to the difference between the estimate derived from a sample survey, and the true value that would result if the whole population was tested under the same conditions (Babbie, 2007). Sampling errors were also minimised in the survey by using a large sample size of one hundred and fifty respondents. A large sample size is more representative of the population.

### **3.12.2 Response Error**

Response errors are the estimated inaccuracy that can be introduced by the researcher, the interviewer or the respondents (Cooper and Schindler, 2003). The researcher may make the error in the design of the measurement instrument or may not properly define the problem and the related information required (Can't, et al., 2003). Response errors can also occur when the respondent deliberately or mistakenly provides incorrect answers to the survey questions (Tustin et al., 2005). Response errors were minimised by carefully constructing and pre-testing the questionnaires. The use of self-administered questionnaires, also, assisted in reducing response errors, because unclear questions were clarified by the researcher to the respondents. However, data for the study at hand was only obtained from the owners who were willing to complete the questionnaire during the interview. This might have created a bias relative to owners who refused to participate in the survey.

### **3.12.3 Non-Response Error**

Loubser (1999) describes a non-response error as an error caused by failure to contact all members of a sample and/or the failure of some contacted members of the sample to respond to all or a specific part of the questionnaire. The non-response error occurs because people who respond to the survey might not have characteristics similar to those who do not. Non-response errors were reduced to the absolute minimum in the research study by using personal interviews which involves the researcher and the respondents and by repeated telephone calls and visits to the respondents (Buckingham and Saunders, 2004). The sample was big enough to ensure representativeness and the use of personal interviews improved the response rate as respondents were willing to co-operate. Refusals were replaced by contacting other members of the population to make sure that 109 respondents were interviewed.

### **3.12.4 Validity and Reliability of Qualitative Research**

In qualitative research, the appropriateness of validity and reliability is a hot topic of discussion. Some authors argue that validity and reliability in qualitative research are inappropriate, while others say these terms are relevant to qualitative research just as they are in quantitative research. For example Yardley (2008) argues that qualitative research accepts and works with the influence of errors caused by researcher's influence but quantitative research depends on elimination of such errors. He therefore shows that validity and reliability are irrelevant to the qualitative research. However this argument contradicts the concept of rigour as elaborated by Aroni et.al., (1999) which postulated that rigorous research process

results in more trustworthy data. Some researchers have even explained how to improve rigour of the qualitative research and therefore ensuring validity and reliability of qualitative findings. Elliot et al., (1999) concluded that validity and reliability in qualitative research can be improved by credibility checks through feedback, coherence of a story, triangulation and verification.

This study has adopted some of the methods mentioned by Elliot et.al. (1999) to ensure the validity and reliability of the research study. The qualitative data were collected from three different sources, the incubator managers, the well informed incubatees workers and the incubate business manager. This provides opportunity to establish the validity and reliability of data from one source against the other source.

### **3.12.5 Validity and Reliability in Quantitative Research**

In quantitative research, validity and reliability are the very important measurements of research quality. To ensure that the quantitative research is valid and reliable, the following things were done; repeated reading on the developed questionnaire was carried out to check on the correctness of the wording, whether the questions measure what they are supposed to measure and if there is any biasness, as well as knowing if the respondents can understand the questions as the researcher intends. A pilot study was conducted to make sure the questionnaire yield valid information and fortunately the pilot study showed that respondents understood clearly the questions; therefore the questionnaire was used for data collection. Factor analysis and reliability testing were done to ensure construct validity and reliability.

### **3.12.6 Reporting the Results**

According to Zikumund (2003) reporting the results is the end of the research process. It is at this stage of the research that the researcher reports the research findings, conclusions and makes recommendations (Gerber-Nel et al., 2005).

### **3.13 Ethical Issues**

Ethics here refer to the code of conduct or expected societal norm of behaviour while conducting research (Sekaran, 2003). In any research conducted, there are a number of ethical issues that need to be taken into consideration. Ethical issues are of great importance to all kinds of research and of particular importance when human subjects are involved (Marczyk et al., 2005). These ethical issues arise at each stage of the research process from problem identification to the dissemination of research results (Sekaran, 2003).

In social sciences, a number of ethical codes have been developed to provide guidance when doing research. These research ethics include protecting human participants, such as respecting the respondents, doing no harm to the respondents and selecting the respondents fairly (Malhotra, 2006). Additionally, other ethics relate to informed consent and confidentiality of the information provided by respondents. In fact, it is the duty of the researcher to maintain the confidentiality of all information that might affect the privacy and dignity of the research participants (Marczyk, et al., 2005).

This study poses a number of ethical issues that were considered during the whole process of conducting the study. The first ethical issue relates to informed consent, which means that prospective research participants must be fully informed about

the procedures and risks involved in the research and must give their consent to participate. Informed consent requires informing participants in advance about the overall purpose of the study, such as the main features of the study and its importance as well as the risks and benefits of their participation.

The consent may be communicated in a written form, verbally, or in an audiotape or videotape, depending on the nature of the study. In this study, the owner-managers of the SMEs were personally handed an introductory letter explaining the purpose of this study and its importance to the researcher, to the SMEs, and to the public at large. Furthermore, with regard to confidentiality, the researcher guaranteed the participants that identifying information would not be made available to anyone who was not directly involved in the study. Additionally, all sources used in this study were acknowledged.

### **3.14 Chapter Summary**

This chapter provided a discussion of the research methodology applied to the present study. The scope of the survey, the sampling method and the organisation of the survey were comprehensively discussed. Additionally, the chapter examined the data gathering technique to be used for the research study, especially the rationale for choosing the self-administered questionnaire and telephone interview. Furthermore, the chapter focused on the editing, coding and processing of data and the statistical packages to be used to analyse data. Finally, chapter examined the reliability of the results. Ethical issues and errors that can affect the validity of the results and the techniques that would be used by the researcher to minimise them were discussed.

## CHAPTER FOUR

### RESULTS AND INTERPRETATION

#### 4.1 Introduction

In the presentation of the results, the series of questions relating to a specific hypothesis will be stated. Each question was restated as in the research instrument and the justification of asking that particular question was highlighted and supported. The responses to each question were presented and analysed at the end of each series of questions pertaining to a specific hypothesis. To assist in data analysis, tables, bar charts and pie charts were used. The presentation of the results followed the structure of the questionnaire. To measure and interpret statistically the relationship between dependent and independent variables, T- test and cross tabulation and multiple regression models were used.

#### 4.2 Response Rate

The response rate, which can also be known as the completion rate in survey research refers to the ratio of the number of people who answered the survey to the total number of the sample.

**Table 4. 1: Response Rate**

| <b>Sample category</b> | <b>Number</b> | <b>Percentage (%)</b> |
|------------------------|---------------|-----------------------|
| Initial sample         | 150           | 100                   |
| Unavailable            | 7             | 5                     |
| Discarded              | 6             | 4                     |
| Total sample loss      | 13            | 9                     |
| <b>Usable sample</b>   | <b>137</b>    | <b>91</b>             |

**Source:** researcher

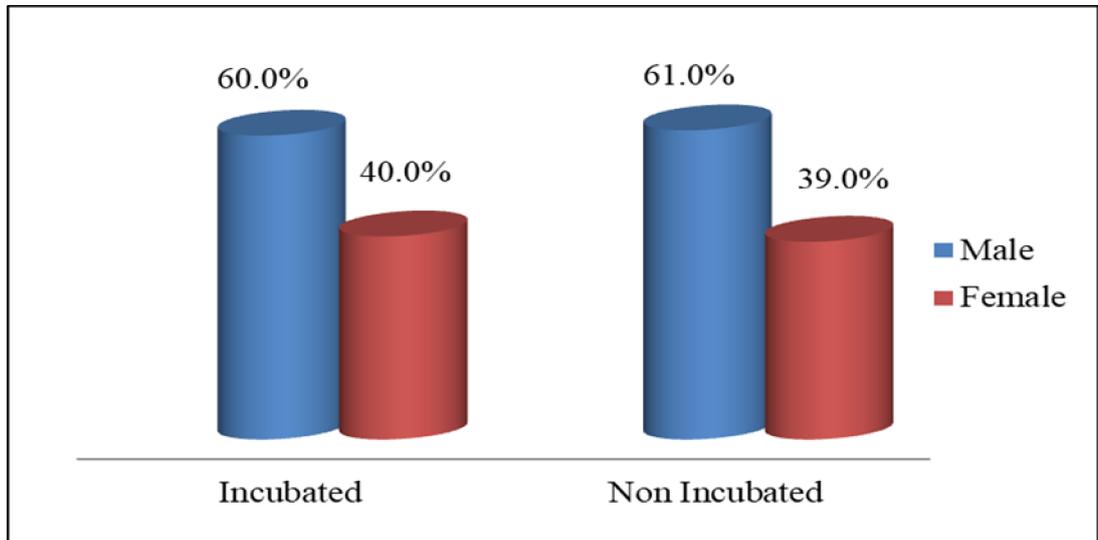
From Table 4.1, the result shows that respondents were unavailable for the survey and these left 141 respondents available. However, out of the 141 respondents that were left 6 did not respond effectively during the interview. Therefore, 137 respondents representing 91% percent of the respondents were available for the survey.

### **4.3 Demographic Profile**

This section identified and discussed demographic factors related to SMEs in the business incubator and the respondents answered on behalf of the enterprises. Aspects related to the enterprise such as product(s) manufactured, status, gender, age and educational qualifications of the respondents, period of operating and the legal status of the business will be discussed in this section. Proctor (2000) explains that demographic data are needed to obtain basic information about the respondent. It provides identification material about the respondent such as age and gender. Demographic data, in addition, help through the analysis of subgroups to provide a method for identifying differences in key results in responses by subgroups such as age and gender.

#### **4.3.1 Gender Distribution**

The inclusion of this question was necessary to enable the researcher to obtain information as regards to whether the respondents were male and female. Furthermore, this question assisted in establishing whether there was any relationship between the competitiveness of enterprises and gender of the SME owner/manager. Figure 4.1 shows the graphical representation of the gender of the respondents.



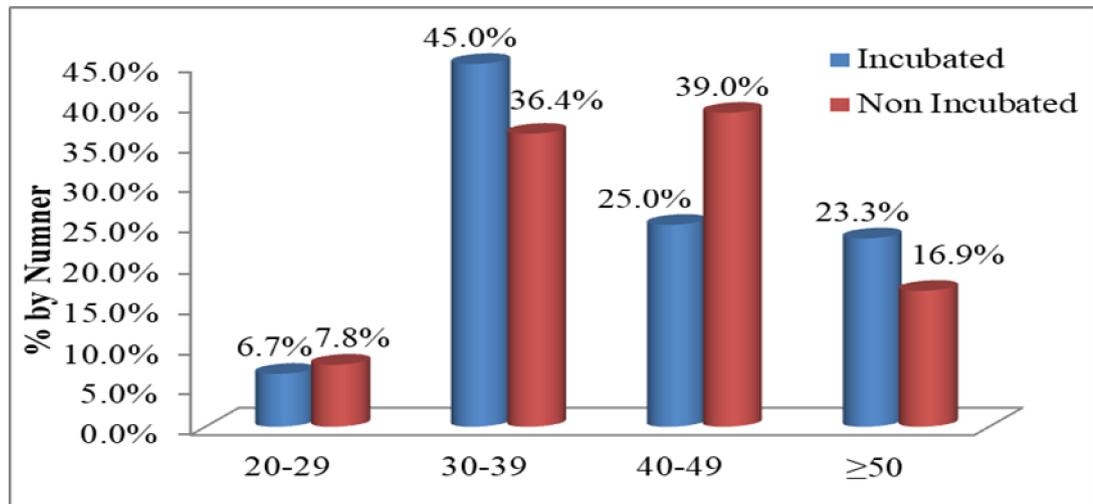
**Figure 4.1: Gender of Respondents**

**Source:** researcher

**Comment:** The study involved a total of 137 respondents including 51(37.2%) from Arusha, 47(34.3%) from Dar es Salaam and 39(28.5%) from Mbeya regions. From the total respondents, 60(43.8) are incubated while 77(56.2) are non-incubated businesses. Of the total incubated businesses 60 percent were men and 40 percent were women, and of the total non-incubated businesses 61 percent were men and 39 percent were women. The findings reveal that the number of male respondents exceeded that of females in both incubated and non-incubated businesses.

#### 4.3.2 Age of Respondents

By knowing the age of the respondent, the researcher will be able to establish whether the age of the SME owner is related to the ownership and performance of the SME. In addition, it will also assist in deducing whether age has an effect on the business competitiveness of the SME owner/manager. Figure 4.2 will provide a graphical presentation of the results.



**Figure 4.2: Age of Respondents**

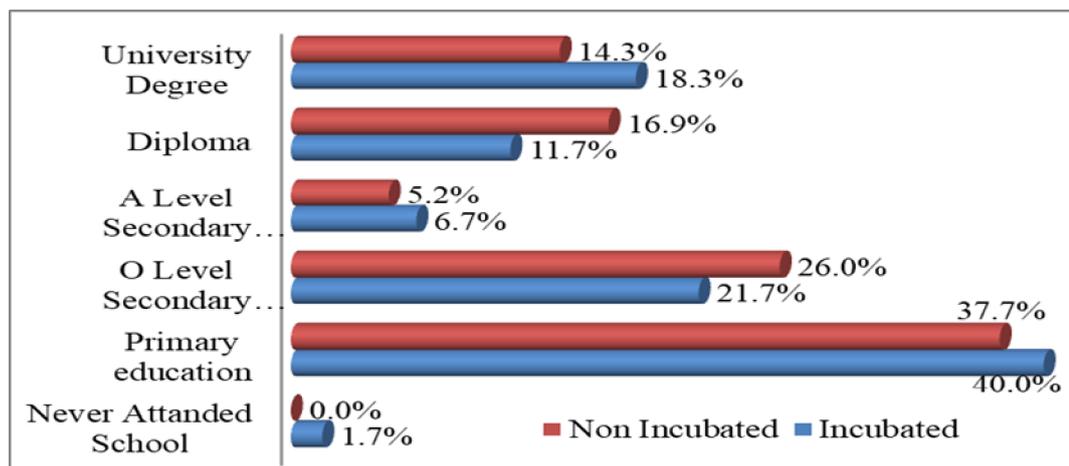
**Source:** researcher

**Comment:** Of the incubated businesses 6.7 percent were between 20 to 29 years old, 45 percent were between 30 to 39 years old, 25 percent were between 40 to 49 years old, 23.3 percent were above 50 years old, of the non-incubated businesses 7.8 percent were between 20 to 29 years old, 36.4 percent were between 30 to 39 years old, 39 percent were between 40 to 49 years old, 16.9 percent were 50 years old and above. From the data, most of the SME owners/managers were aged between 40 to 49 years from non-incubated business followed by 30 to 39 from the incubated business. This implies the majority of the respondents had acquired enough experience in doing business which enhanced their business stability and expertise. The expertise helps the owners to take a favourable decision on their sources of capital and risk management. This reflects findings from other studies which show that the entrepreneurs' ages in Tanzania generally lie between 25 to 39 years (Mlingi, 2000).

#### 4.3.3 Formal Education

The structure of formal education in Tanzania consists of three levels namely:

primary, secondary and higher education. Basic or first level education constitutes seven years of primary education. Secondary or second level education consists of the Ordinary level (which is four years post primary education) and Advance level (which is two years post Ordinary level). Higher education or tertiary level includes programmes and courses offered by higher education institutions such as universities. The purpose of asking this question is to establish the level of education of the owners of small to medium enterprises. Figure 4.3 shows the results of the responses provided.



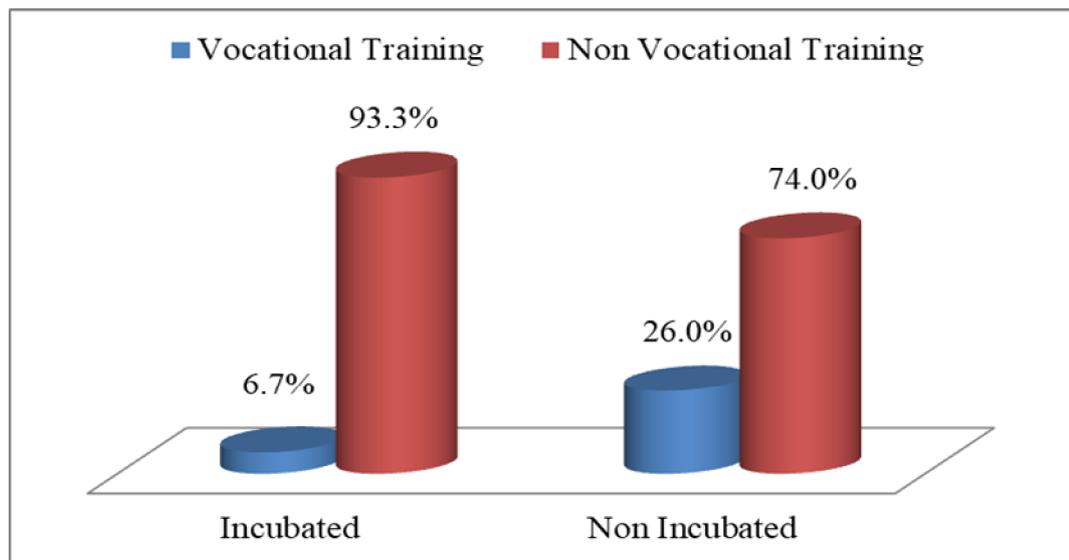
**Figure 4.3: Education Level of Respondent**

**Source:** researcher

**Comment:** Among the incubated respondents 1.7 percent had not attended Formal school, 40 percent had Primary education, 21.7 percent had Ordinary level secondary education, 6.7 percent had Advanced level secondary education, 11.7 percent had Diploma and 18.3 percent had University Bachelor degree. Hence among non-incubated respondents, 37.7 had Primary education, 26 percent had Ordinary education, 5.2 percent had Advance education, 16.9 had Diploma and 14.3 percent had Bachelor degree. This reflects that majority of the respondents had primary education followed by ordinary level education.

#### 4.3.4 Vocational Training

In addition to the question focusing on formal education, there was another question which intended to find out whether or not the respondents had attended any vocational training.



**Figure 4.4: Vocational Training**

**Source:** researcher

The findings indicate that minority of the respondents 26 and 6.7 percent in non-incubated and incubated business had attended vocational training, offered by VETA while the majority 93.3 and 74 percent of the respondents in incubated and non-incubated respectively did not attend the vocational training as shown in Figure 4.4.

#### 4.3.5 Experience

There is a common saying that "experience is the best teacher". The SMEs managers are able to learn from their business experience to access or scan the environment for relevant information. Business information providers can also

learn from their experience acquired in the provision of information to determine not only the information needs of their users but also the problems they face in accessing quality information as shown in Table 4.2.

**Table 4.2: Experience of Respondent**

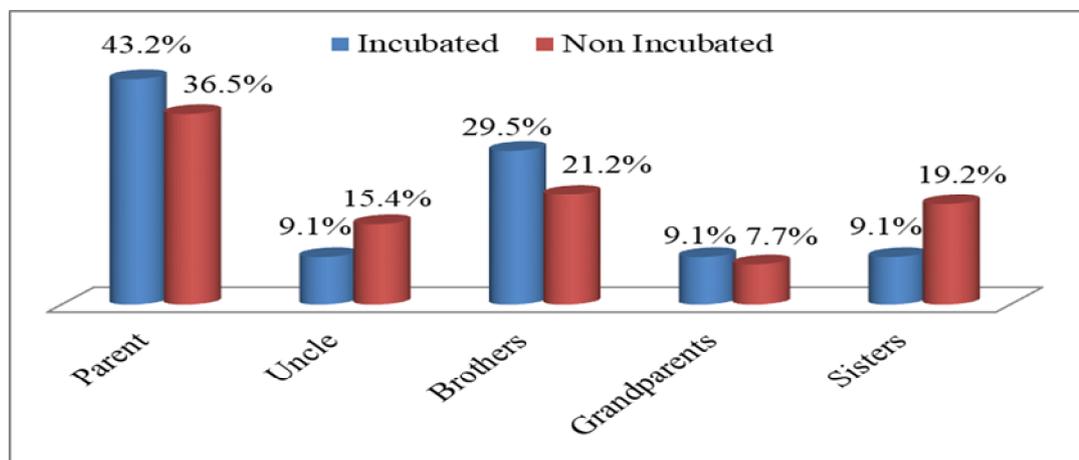
|  |            | If yes how many years of experience |     |      |          | Total  |
|--|------------|-------------------------------------|-----|------|----------|--------|
|  |            | 1-3                                 | 4-7 | 8-12 | above 12 |        |
| Did you start your business in the same field as your previous employment? | Count      | 5                                   | 10  | 3    | 3        | 21     |
|  | % of Total | 24%                                 | 48% | 15%  | 14%      | 100.0% |

**Source:** researcher

The researcher reveals that only 21(17%) out of 137 respondents had started their business in the same fields as their previous employer. The majority of them 10 (48%) had 4 to 7 years of experience while minority 3 (14%) had above 12 years of experience.

#### 4.3.6 Family Background

From the literature, it is generally acknowledged that the offspring of business operators are more likely to start and operate their own enterprise compared to the children of others.



**Figure 4.5: Family Background**

**Source:** researcher

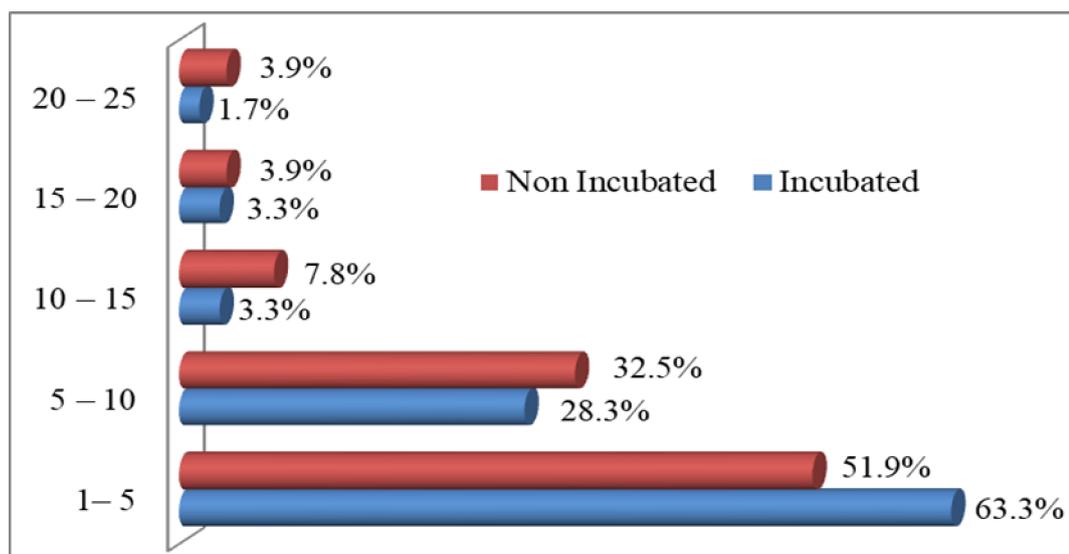
The current study indicates that the majority of the respondents in the sample 43.2 and 36.5 percent in incubated and non-incubated respectively had parent background in businesses. The research revealed also that either brother, uncle, sister, aunt, grandparent had a business before as shown in Figure 4.5.

#### 4.4 Characteristics of the Enterprises

This part of the study provides an analysis of enterprise characteristics. It gives a general picture of SMEs by considering enterprise's age, a number of workers and also kinds of products produced. The ownership type and a number of people working have an effect on the performance level of enterprises.

##### 4.4.1 Age of the Enterprise

The researcher asked this question in order to obtain information with regard to the period the business has been in operation, which is the age of the enterprise. This question also allowed the researcher to determine the competitiveness of the SMEs.



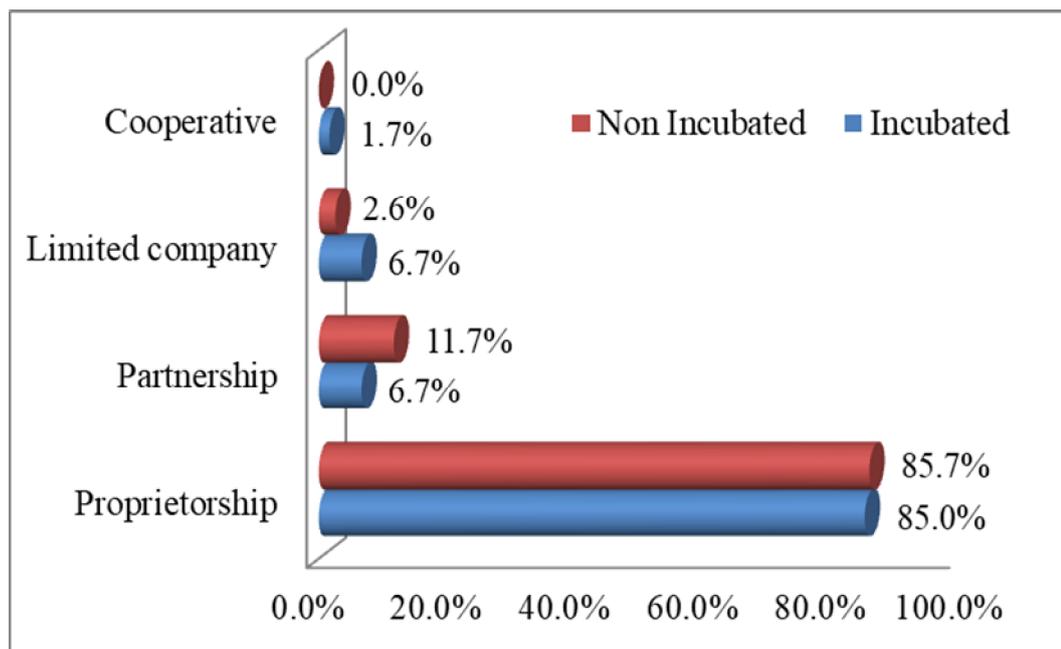
**Figure 4.6: Establishment of Enterprises**

Source: researcher

**Comment:** The result from Figure 4.6 indicates that 63.3 percent of incubated businesses had 1 to 4 years in business operation, 28.3 percent had 5 to 9 years in business operation, 3.3 percent had 10 to 14 years, 15 to 19 years respectively in business operation, 1.7 percent had more than 20 years in business operation. Among non-incubated businesses 51.9 percent had 1 to 4 years in business operation, 32.5 percent had 5 to 9 years in business operation, 7.8 percent had 10 to 14 years in business operation and 3.9 percent had more than 20 years in business operation as shown in Figure 4.6. The relatively young age of incubated businesses may be related to the fact that business incubator was only introduced in Tanzania after the SMEs policy had been put in place in 2003.

#### 4.4.2 Forms of Ownership

Figure 4.7 below illustrates the forms of business ownerships of the respondents who participated in this study.



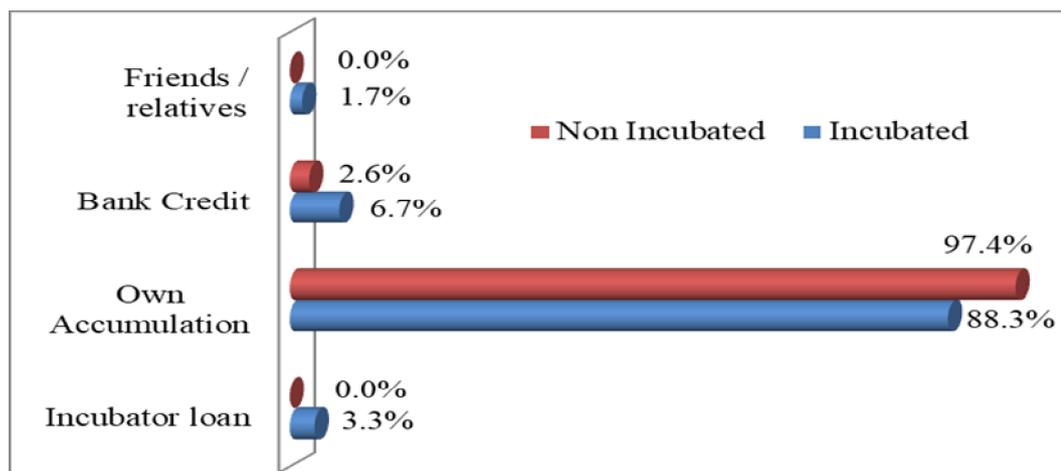
**Figure 4.7: Forms of Ownership**

Source: researcher

**Comment:** From the study, of the total incubated businesses 85 percent had sole proprietorships, 6.7 percent had a partnership, 6.7 percent had limited company and only 1.7 percent had a cooperative business while for non-incubated businesses 85.7 percent had a sole proprietorship, 11.7 percent had a partnership, 2.6 percent had limited company as shown in Figure 4.7 above. This can be linked to the fact that the sole trader is the easiest and cheapest form to start a business, and that most businesses start as sole traders and then may change over to corporation or company once they expand (Storey, 2000).

#### 4.4.3 Source of Capital

The purpose of this question was to obtain information as to whether SMEs have access to bank loans. The information obtained from this section will assist the researcher in analysing whether there is a relationship between business incubator and access to finance.



**Figure 4.8: Access to Bank Loan**

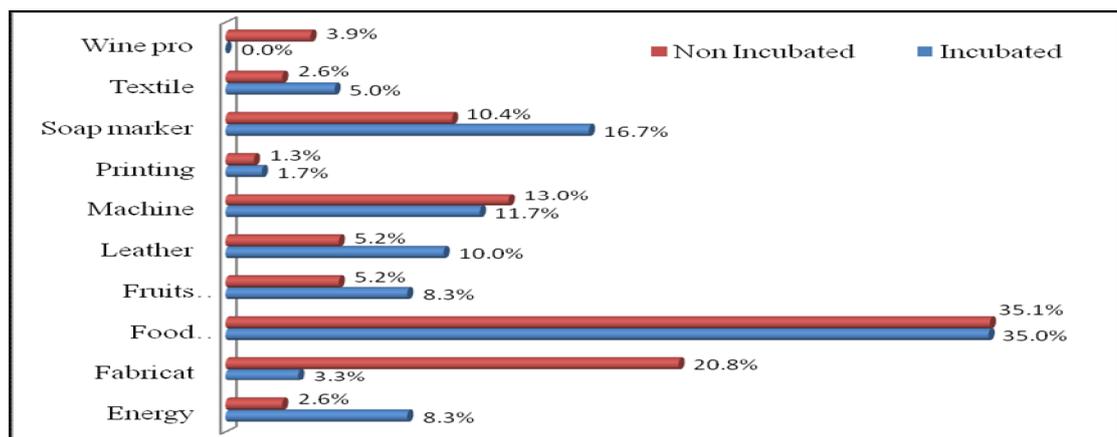
**Source:** researcher

The majority of respondents in incubated business 88.3 percent had started businesses from their own capital, 6.7 percent had capital from a bank, 1.7 percent

obtained capital from friends and relatives and 3.3 percent obtained capital from business incubator program. Among non-incubated business, 97.4 percent had started businesses from their own capital and 2.6 percent secured loan from the bank. Lack of collateral, information asymmetries between banks and SMEs as well as high risk of failure are all causes of lack of bank loans for SMEs.

#### 4.4.4 Nature of Business

This question would enable the researcher to deduce whether the type of industry the SME operates in would have an impact on business competitiveness. The results of this question are presented in Figure 4.9.



**Figure 4.9: Product Manufactured by the Enterprise**

**Source:** researcher

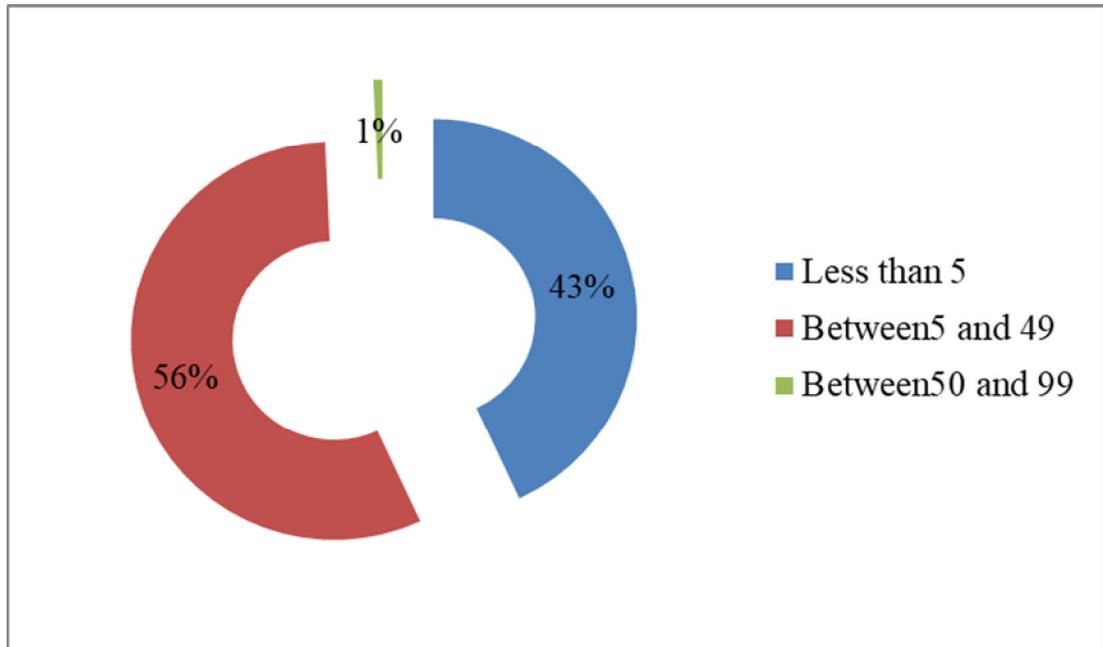
**Comment:** The study reveals that 35 percent of incubated businesses are food processors, 3.3 percent are metal work fabricators, 8.3 percent are manufacturers of machine and equipment for energy appliances, 8.3 are fruit processors, 10 percent are leather processors, 16.7 percent are soap makers, 11.7 percent are machine fabricators, 5 percent are textile manufacturers, and 1.7 are printers. Among non-incubated businesses, 35.1 percent are food processors, 20.8 are metal work fabricators, 2.6 percent are manufacturers of machine and equipment for energy

appliances, 5.2 percent are fruits and leather processors respectively, 10.4 percent are soap makers, 13 percent are machine fabricators, 1.3 are printers, 2.6 percent are textile manufacturers, while 3.9 percent of non-incubated respondents were wine processors. The results imply that the most lucrative businesses in the division were in food processing, metal work fabrication, machine fabricating and soap making.

#### **4.4.5 The Size of Enterprise**

The purpose of asking this question was to provide information about the size of the SMEs and classify businesses as either small or medium in terms of the SMEs definition provided by the National Small Business Act (2003). By knowing the size of the business the researcher will also be able to conduct T-test analysis since the size of the business is one of the variables which were being tested in the regression analysis. Figure 4.10 provides the information on the number of employees employed by the business.

Amongst the SMEs who were interviewed, 77(56%) of the businesses had employees within the range of 5 - 49, 59(43%) of the SMEs employed between 0 ó 4 employees and only 1 (1%) of the SMEs had employees in the range of 50 - 99. A t-test was conducted to test if there was any significant difference in a number of employees and capital investment in machinery in incubated and non-incubated business. Results of the test revealed that there was no statistically significant difference in a number of employee and capital investment in machinery in incubated and non-incubated business at  $p < 0.05$  as shown in Table 4.3.



**Figure 4.10: Number of Employees**

Source: researcher

**Table 4. 3: Independent T Test for Capital Versus Number of Employees**

| t-test for Equality of Means    |      |       |      |      |        |                 |                         |       |
|---------------------------------|------|-------|------|------|--------|-----------------|-------------------------|-------|
|                                 |      | F     | Sig. | T    | Df     | Sig. (2-tailed) | 95% Confidence Interval |       |
|                                 |      |       |      |      |        |                 | Lower                   | Upper |
| Number of employees             | EVA  | 0.95  | 0.33 | 0.13 | 135.00 | 0.89            | 0.16                    | 0.19  |
|                                 | EVNA |       |      | 0.14 | 129.82 | 0.89            | 0.16                    | 0.19  |
| Capital investment in machinery | EVA  | 14.46 | 0.00 | 2.00 | 135.00 | 0.05            | 0.00                    | 0.39  |
|                                 | EVNA |       |      | 2.07 | 134.46 | 0.04            | 0.01                    | 0.38  |

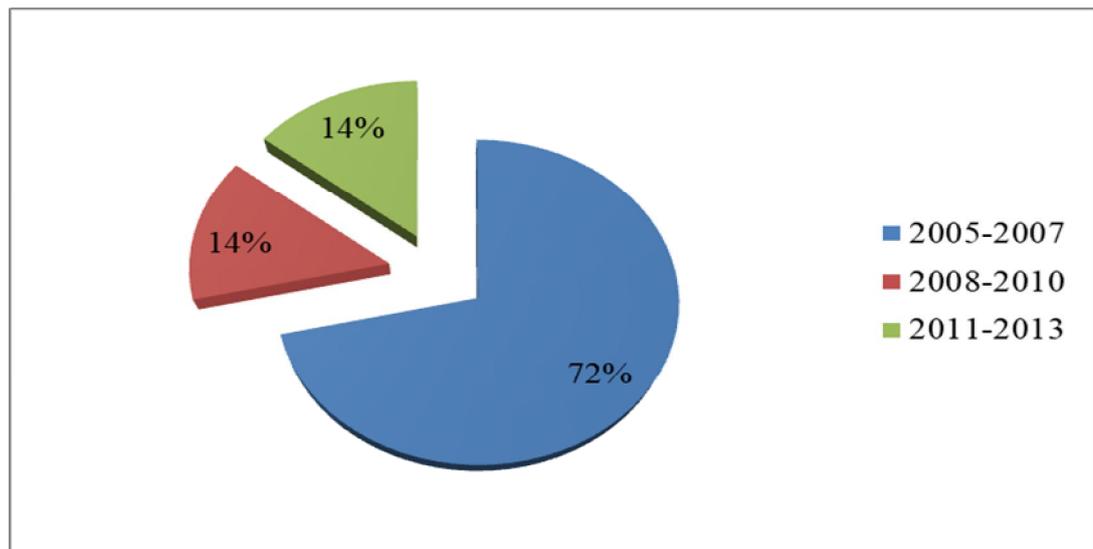
Source: researcher

#### 4.5 Business Incubator

In this section the results gained related to the business incubator are presented. An interesting point is the fact that there was a full agreement on the question whether an incubator would be a good idea for the formation of competitive SMEs businesses. All the interviewees were very positive about the idea of starting a business incubator.

#### 4.5.1 Establishment of Business Incubator

Figure 4.11 shows data about the time period when business incubator was established.



**Figure 4.11: Establishment of Business Incubator**

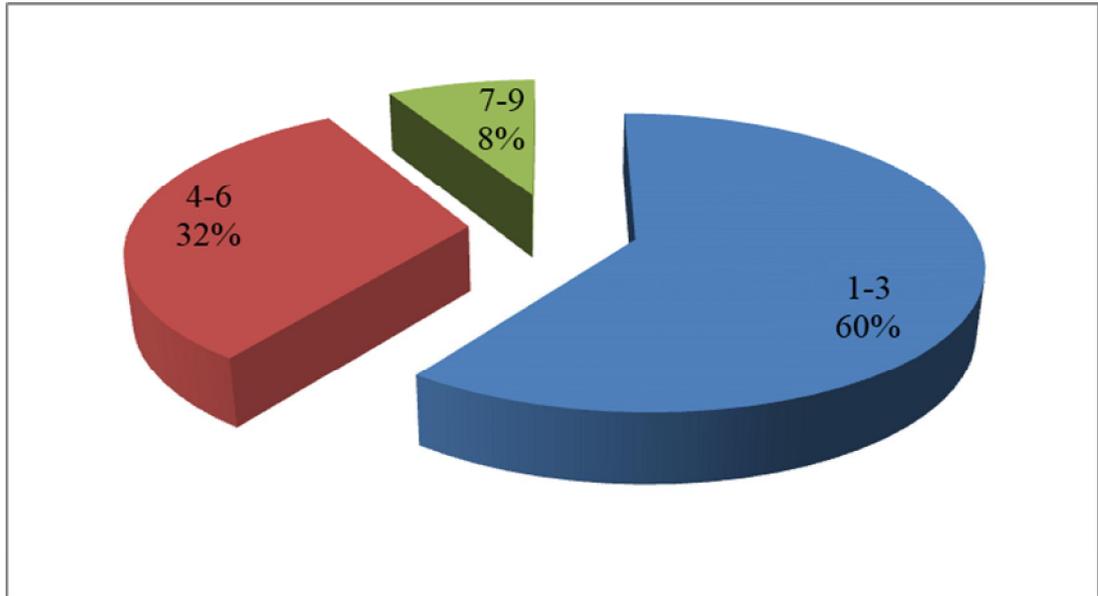
**Source:** researcher

The highest response was founded in the period 2005-2007 with 72% while the lowest response was founded in the period of 2008-2010 and 2011-2013 with 14% respectively.

#### 4.5.2 Length of Time in the Incubation Programme

During the incubation period the tenants enjoy a range of privileges. One set of privileges refers to considerable facilities concerning renting of business premises. Thus, in the first year, the tenants receive for free all services offered by the incubation programme. In the second year, they pay only 25% to 50% of the market price. In the third year, they pay 70% to 100% of the cost. Nevertheless, it is the tenants' duty to pay bills for electricity, water, rent and machine services.

Figure 4.12 below shows the analysis of length of time spent by respondents.



**Figure 4.12: The Length of Time in Business Incubator Programme**  
**Source:** researcher

About 60 percent of the respondents have been in the BI programme between 1-3 years, 32 percent of the respondents have been for 4-6 years while only 8 percent of the respondents have been in the BI for 7-9 years. This study also found out that the respondents who have been in the BI for 4-6 years had statistically significant higher profit per month ( $M = 1213157.89$ ,  $SD = 1530871.403$ ) than 1-3 years ( $M = 745833.33$ ,  $SD = 899235.787$ ). The following Table 4.4 presents an independent t-test statistics analysis.

**Table 4.4: Group Mean for Profit per Month in the Incubation**

|                  |     | N  | Mean       | Std. Deviation | Std. Error Mean |
|------------------|-----|----|------------|----------------|-----------------|
| Profit per month | 1-3 | 36 | 745833.33  | 899235.787     | 149872.631      |
|                  | 4-6 | 19 | 1213157.89 | 1530871.403    | 351205.986      |

**Source:** researcher

The independent t test for equality of means as shown in Table 4.5 indicated that the number of years spent by particular respondent in business incubator did not reveal any significant differences ( $t(53) = 159$ ) in the amount of profit earned per month at  $p > 0.05$ .

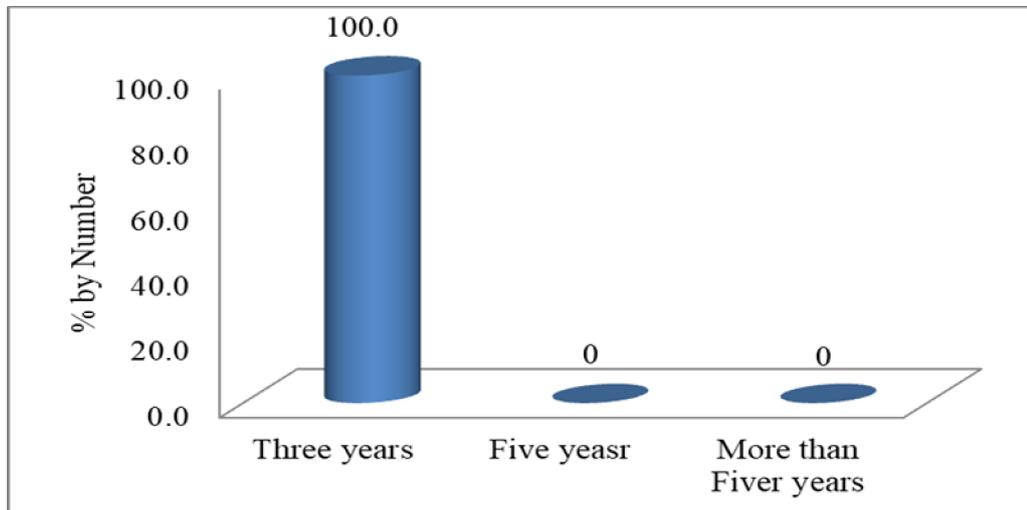
**Table 4. 5: Independent T-Test for Length of Time in Incubator**

| Profit per month | F     |      | t-test for Equality of Means |       |                 |                         |        |
|------------------|-------|------|------------------------------|-------|-----------------|-------------------------|--------|
|                  | EVA   | Sig. | T                            | Df    | Sig. (2-tailed) | 95% Confidence Interval |        |
|                  |       |      |                              |       |                 | Lower                   | Upper  |
| EVNA             | 1.876 | .177 | -1.43                        | 53    | .159            | -1123232                | 188583 |
|                  |       |      | -1.22                        | 24.73 | .233            | -1254188                | 319539 |

**Source:** researcher

#### 4.5.3 Graduation Period

Graduation rates are a key benchmark for business incubators. They reflect the ability of incubators to help their tenants achieve economic stability and overcome the liability of newness so that they can compete independently in the external environment.



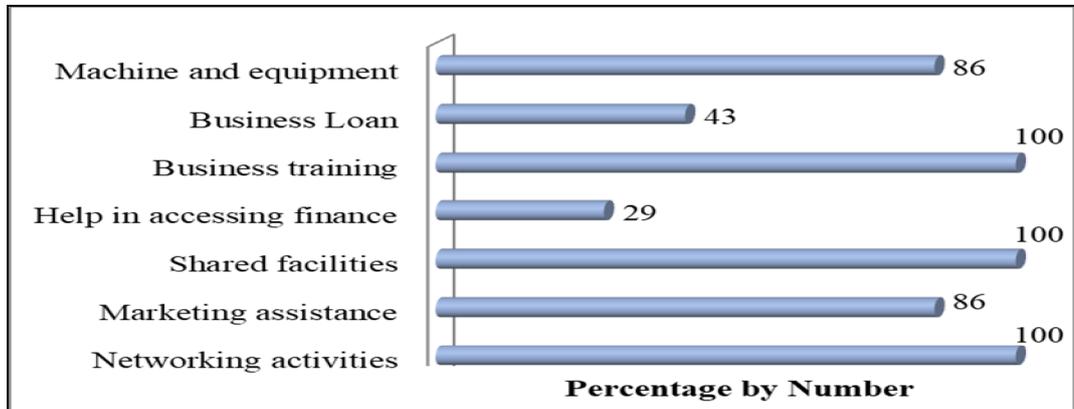
**Figure 4.13: Graduation Period**

**Source:** researcher

The results indicated that all incubates spent the maximum time in three years for graduation. The research revealed that 100% of the incubator clients have more than three years (above graduation period) and none of the incubator clients graduated due to lack of funds for new incubators as shown in Figure 4.13.

#### 4.5.4 Services Offered by Business Incubators

Figure 4.14 shows the percentages of services offered by business incubators.



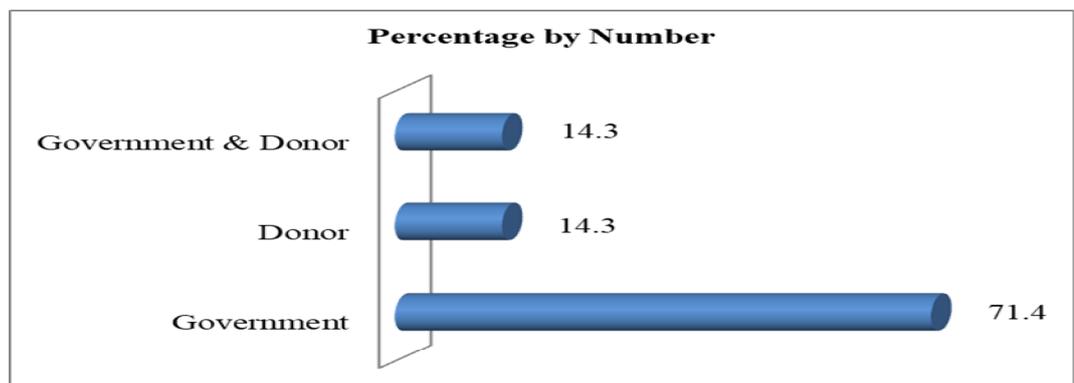
**Figure 4.14: Services Offered by Business Incubators**

Source: researcher

The results indicated that majority of the business incubators offer networking activities, business training and shared facilities (100%) respectively, followed by marketing assistance and machine and equipment (86%), business loan (43%) while very few offered support to access bank loan (29) as shown in Figure 4.14.

#### 4.5.5 Operating Expenses

Interviewed incubator manager indicated that 71.4 percent of operating expenses are from Government, while 14.3% are from Donors, and another 14.3 % are from both Government and Donors.



**Figure 4.15: Financial Information of the Incubation Operation Expenses**

Source: researcher

## 4.6 Performance of Enterprise

The purpose of this section is to analyse the performance of SMEs. Different performance measures which include both financial and non-financial were used as measures of performance.

### 4.6.1 Business Performance

In this test, the three aforementioned business performance indicators namely profit per year, total assets and quality of physical infrastructure were used as test variables. The business incubated status (1 = Yes and 2 = No) were used as group variable. The results were as presented in Table 4.6.

**Table 4. 6: Group Mean for Business Performance**

| Incubation status         |               | N  | Mean       | Std. Deviation | Std. Error Mean |
|---------------------------|---------------|----|------------|----------------|-----------------|
| Profit per month          | Incubated     | 60 | 893333.33  | 1122363.829    | 144896.547      |
|                           | Non Incubated | 77 | 1752077.92 | 5801171.918    | 661104.896      |
| Total assets              | Incubated     | 60 | 1.98       | .676           | .087            |
|                           | Non Incubated | 77 | 2.05       | .667           | .076            |
| Quality of infrastructure | Incubated     | 60 | 2.95       | .287           | .037            |
|                           | Non Incubated | 77 | 3.91       | .332           | .038            |

**Source:** researcher

This study found out that not incubated business had statistically significant higher profit per year ( $M_1 = 1752077.92$ ,  $SD_2 = 5801171.918$ ) than incubated business ( $M = 893333.33$ ,  $SD = 1122363.829$ ). The study found out that total assets was statistically significant higher for non-incubated business ( $M = 2.05$ ,  $SD = 0.667$ ) than for incubated business ( $M = 1.98$ ,  $SD = 0.676$ ). The study also found out that there was the statistically significant difference in the quality of physical infrastructure for non-incubated ( $M = 3.91$ ,  $SD = 0.332$ ) and that of incubated business ( $M = 2.95$ ,  $SD = .287$ ). The largest difference was on total profit per year

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followed by quality of physical infrastructure and total assets. Table 4.6 presents an independent t-test for business performance.

**Table 4.7: Independent T-Test for Business Performance**

|                           |                  | F    |      | Sig.  |        | t-test for Equality of Means |             |                    |                         |       |
|---------------------------|------------------|------|------|-------|--------|------------------------------|-------------|--------------------|-------------------------|-------|
|                           |                  |      |      |       |        | T                            | Df          | Sig.<br>(2-tailed) | 95% Confidence Interval |       |
|                           |                  |      |      |       |        |                              |             |                    | Lower                   | Upper |
| Profit per month          | EVA <sup>3</sup> | 2.97 | 0.09 | -1.13 | 135    | 0.26                         | -2362487.9  | 644998.723         |                         |       |
|                           | EVNA             |      |      | -1.27 | 83.23  | 0.21                         | -2204812.44 | 487323.264         |                         |       |
| Quality of infrastructure | EVA              | 0.01 | 0.91 | -0.59 | 135    | 0.55                         | -.3.00      | 0.16               |                         |       |
|                           | EVNA             |      |      | -0.59 | 126.08 | 0.55                         | -0.298      | 0.16               |                         |       |
| Total assets              | EVA              | 2.19 | 0.14 | 0.76  | 135    | 0.45                         | -0.066      | 0.147              |                         |       |
|                           | EVNA             |      |      | 0.77  | 133.51 | 0.44                         | -0.064      | 0.146              |                         |       |

**Source:** researcher

As shown in Table 4.7, the results of the independent t-test between incubated and non-incubated business show that all of the stages business performance revealed no statistically significant difference between incubated and non-incubated business at  $p > 0.05$ .

#### 4.6.2 Loan from Bank

**Table 4. 8: Mean and Standard Deviation of Enterprises**

| Business      | N  | Mean       | Std. Deviation | Std. Error Mean |
|---------------|----|------------|----------------|-----------------|
| Incubated     | 60 | 3287931.03 | 4467311.197    | 586586.698      |
| Non Incubated | 77 | 3295454.55 | 6529921.928    | 744153.667      |

**Source:** researcher

From Table 4.8, the mean scores of non-incubated ( $M = 3295454.55$ ,  $SD = 6529921.928$ ) business has statistically significantly higher total cumulative amount of funds from the bank than incubated business ( $M = 3287931.03$ ,  $SD = 67311.197$ ). The following Table 4.9 presents an independent t-test for enterprises.

EVA stands for Equal Variance Assumed  
EVNA stands for equal variance not assumed

**Table 4. 9: The Independent Sample Test for Enterprises**

|                      |      | t-test for Equality of Means |      |       |         |                 |                         |            |
|----------------------|------|------------------------------|------|-------|---------|-----------------|-------------------------|------------|
|                      |      | F                            | Sig. | T     | Df      | Sig. (2-tailed) | 95% Confidence Interval |            |
|                      |      |                              |      |       |         |                 | Lower                   | Upper      |
| Total amount of Loan | EVA  | 1.999                        | .160 | -.008 | 133     | .994            | -1980609.               | 1965562.05 |
|                      | EVNA |                              |      | -.008 | 131.893 | .994            | -1881882.6              | 1866835.6  |

**Source:** researcher

The study revealed that there was no statistically significant difference between the amount of loan borrowed by individual owners from incubated and non-incubated business ( $t(133) = -0.008, p=0.994$ ) at  $p > 0.05$ . Also, the independent t-test between incubated and non-incubated business shows that majority of challenges facing the business performance revealed no statistically significant difference between incubated and non-business at  $p > 0.05$  as shown in Table 4.9. The slow formation of competitive business incubator indicated a statistically significant difference between incubated and non-incubated business. However, the study found out that slow formation of competitive BI was statistically significantly higher for incubated than for non-incubated business ( $t(105.560) = -2.201, p = .030$ ).

#### 4.6.3 Target Market

Cross tabulation describes two or more variables simultaneously and is a joint frequency distribution of cases based on two or more categorical variables (Michael, 2002). Cross tabulation is used to identify the relationships between cross tabulated variables with any type of quantitative data using nominal data. From the Table 4.10, it shows the relationship between targeted markets of incubated and none incubated SMEs.

**Table 4.10: The Major Target Market**

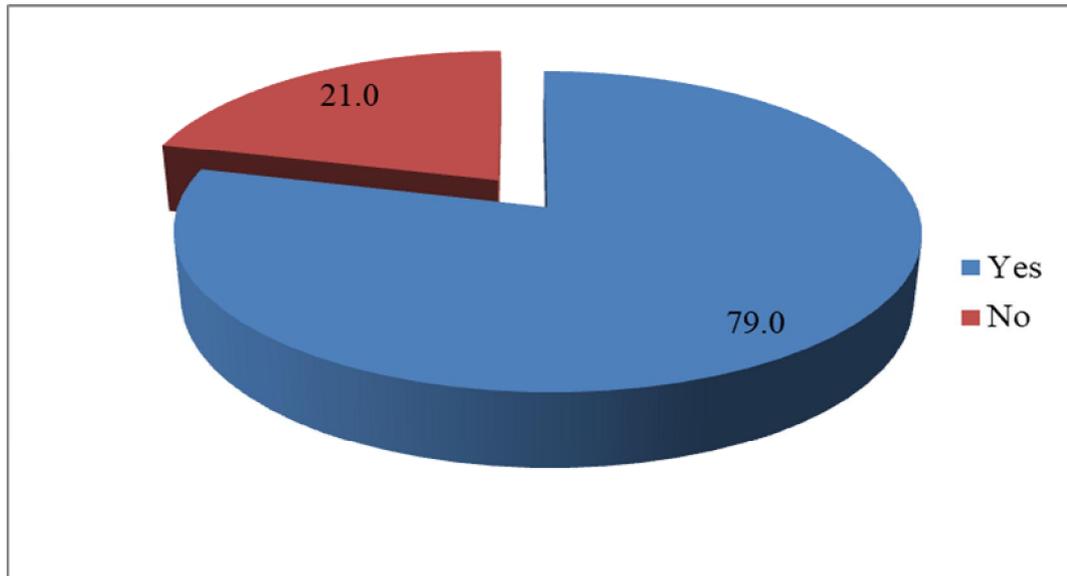
| <b>Target Market</b> | <b>Incubated</b> | <b>Non Incubated</b> | <b>Total</b> |
|----------------------|------------------|----------------------|--------------|
| Individual           | 25               | 57                   | 82           |
|                      | 30.5%            | 69.5%                | 100.0%       |
| Small market         | 22               | 16                   | 38           |
|                      | 57.9%            | 42.1%                | 100.0%       |
| Large market         | 13               | 4                    | 17           |
|                      | 76.5%            | 23.5%                | 100.0%       |

**Source:** researcher

Table 4.10 shows that 76.5 percent of incubated businesses offer their products to large market and non-incubated business offer 23.5 percent. 69.5 percent of non-incubated businesses offer their products to individuals while incubated business offer 30.5 percent. 57.9 percent of incubated business target small market while non-incubated business offers 42.1 percent. On average the respondents were in strong agreement that market information is adequate from for business growth. The study also indicated that customer links are adequately provided by the incubator. These include linkage with multinational companies, networks with other businesses, diversification of market and products, enabling environment and franchising opportunities.

#### **4.6.4 Business Plan**

The research done for the business plan will force the entrepreneur to view the business idea objectively and critically and problems will be anticipated. It will also quantify business goals and objectives. A business plan is an essential tool when applying for financial assistance.



**Figure 4.16: Existing Business Plan**

**Source:** researcher

From the study, seventy nine percent (79%) % of the respondents did prepare a business plan (Figure 4.16), while twenty one percent (21%) of the respondent indicated that business plan is not important for the success of their business. The respondents that did not prepare a business plan planned their businesses based on experience.

#### **4.6.5 Business Registration Status**

As indicated in Table 4.11, majority 46(74.2%) of incubated business were registered while only 16(25.8%) of non-incubated business were registered. This is due to the fact that business incubator helps tenants to acquire business licensing. The research also finds out that 54.74% of the total respondents (incubated and non-incubated business) had not acquired business licensing. However, most of the respondents who did not register their business gave reasons which include; lack of funds, cumbersome registration process and lack of time. In addition, the respondents who have registered their business registered as sole proprietor.

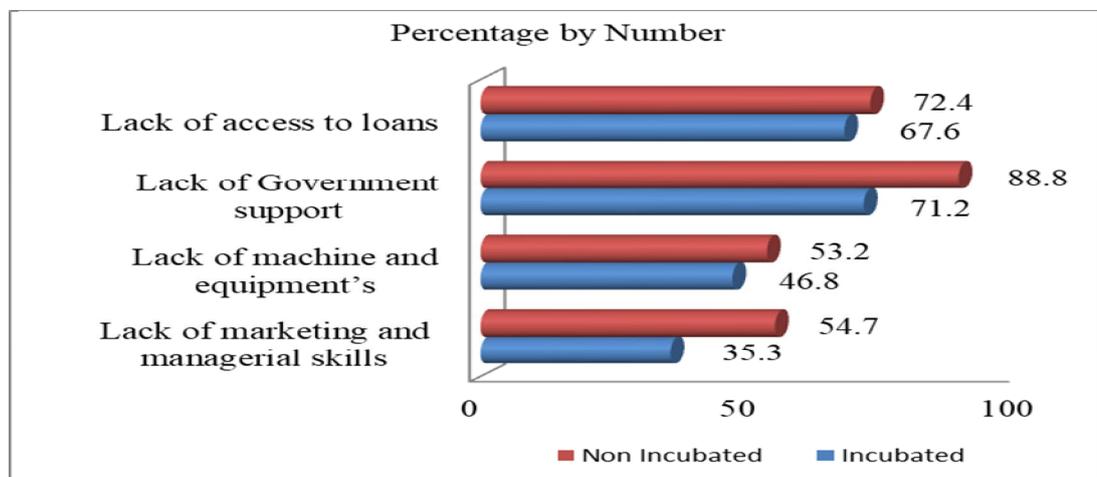
**Table 4. 11: Licensing of Business**

|   |     | Did you operate your business in TBI? |               | Total  |
|---|-----|---------------------------------------|---------------|--------|
|   |     | Incubated                             | Non Incubated |        |
| Does your company have business licensing | Yes | 46                                    | 16            | 62     |
|   |     | 74.2%                                 | 25.8%         | 100.0% |
|   | No  | 14                                    | 61            | 75     |
|   |     | 18.7%                                 | 81.3%         | 100.0% |

**Source:** researcher

#### 4.7 Problems Experienced

Responses regarding problems that were experienced within three years of operation are set out in Figure 4.17. This figure indicates that the most frequently encountered problems by incubated and non-incubated business was lack of Government support (71.2%) and (88.8) respectively and lack of access to loans 67.6 percent for incubated and 72.4 percent for non-incubated business. Other problems, like lack of machine and equipment, marketing and managerial skills was noted by both incubated and non-incubated business owners as relatively important. For example, the lack of finance or Government support affects respondents from acquiring suitable machinery and equipment. In order to determine whether there was any difference between the incubated and non-incubated business, an independent t-test for mean comparison was carried out.



**Figure 4.17: Problems Experience by Enterprises**

**Source:** researcher

**Table 4. 12: Independent T-Test Statistics for Problem Experienced**

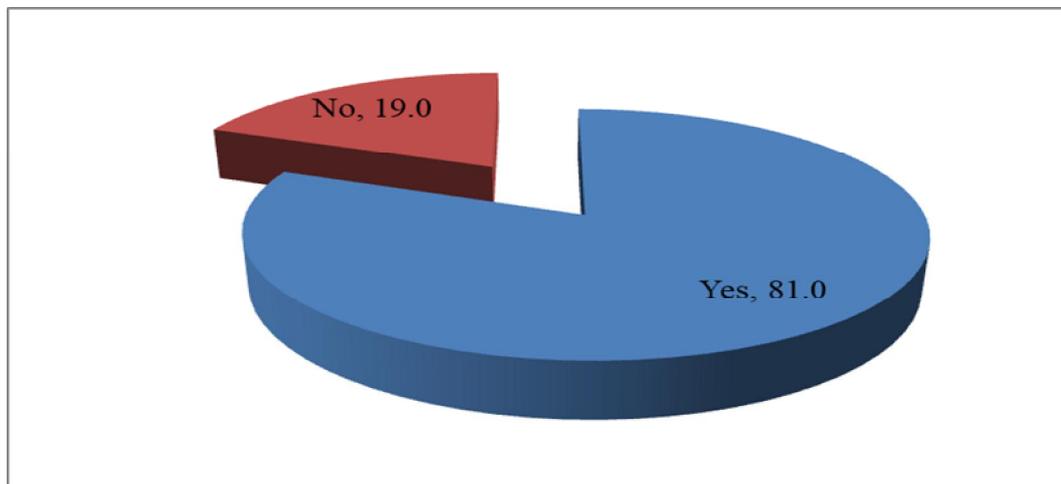
|   |      | t-test for Equality of Means |      |        |        |                 |                         |       |
|---|------|------------------------------|------|--------|--------|-----------------|-------------------------|-------|
|   |      | F                            | Sig. | T      | Df     | Sig. (2-tailed) | 95% Confidence Interval |       |
|   |      |                              |      |        |        |                 | Lower                   | Upper |
| Lack of Marketing and Managerial Skills | EVA  | .33                          | .564 | -.333  | 135    | .740            | -.200                   | .142  |
|   | EVNA |                              |      | -.333  | 126.6  | .740            | -.200                   | .143  |
| Lack of machine and equipment           | EVA  | 1.05                         | .306 | -.635  | 135    | .526            | -.225                   | .116  |
|   | EVNA |                              |      | -.634  | 126.23 | .527            | -.226                   | .116  |
| Lack of government support              | EVA  | .47                          | .493 | .341   | 133    | .734            | -.124                   | .176  |
|   | EVNA |                              |      | .342   | 126.67 | .733            | -.124                   | .175  |
| Lack of access to loans                 | EVA  | 4.29                         | .040 | -1.042 | 134    | .299            | -.254                   | .079  |
|   | EVNA |                              |      | -1.047 | 129.12 | .297            | -.253                   | .078  |
| Slow formation of BI                    | EVA  | 20.679                       | .000 | -2.277 | 133    | .024            | -.300                   | -.021 |
|   | EVNA |                              |      | -2.201 | 105.56 | .030            | -.305                   | -.016 |

**Source:** researcher

As shown in Table 4.12 the results of the independent t-test between incubated and non-incubated business show that majority of challenges face the business performance revealed no statistically significant difference between incubated and non-incubated business at  $p > 0.05$ .

#### 4.7.1 Business Support Services

Figure 4.18 illustrates the responses of SMEs on whether the Tanzanian Government is doing enough to support SMEs in business support services



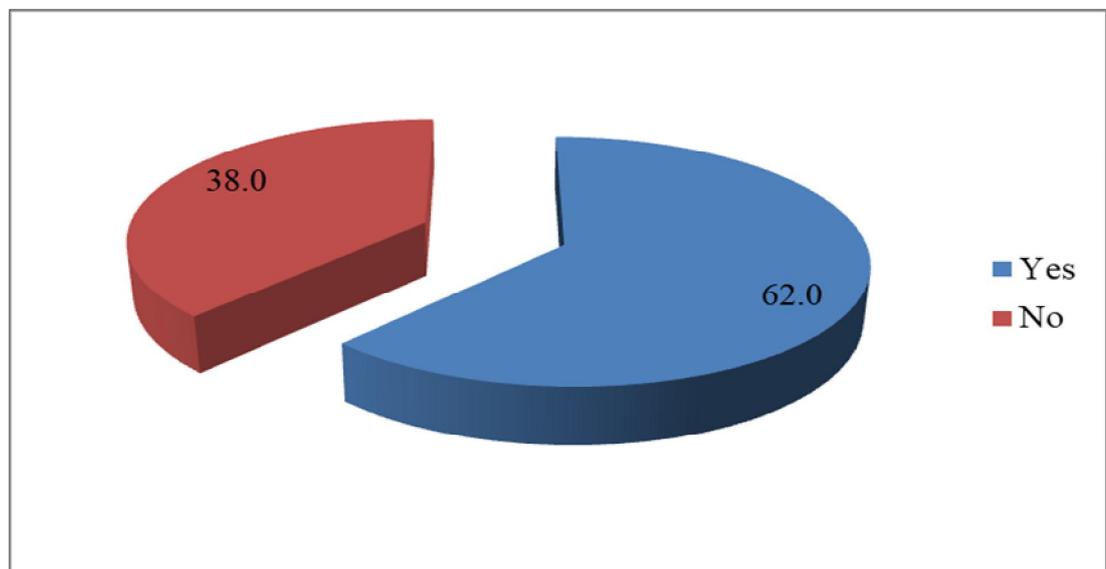
**Figure 4.18: SMEs Received Business Support Services**

**Source:** researcher

Eighty-one percent (81%) of the respondents are satisfied with the Tanzanian Government's initiatives to address skill shortages in SMEs. This has been necessitated by the fact that in a large number of cases, the failure of SMEs has been attributed to a lack of skills, while a minority, nineteen percent (19%) of the respondents responded that they are not satisfied with business support service provided by the Government. Research findings by Sawas and Feng (2005) and Kakati (2003) have indicated that a lack of managerial skills results in the failure of SMEs.

#### 4.7.2 Lack of Access to Loans

Figure 4.19 provides information on whether the respondent's companies are affected by the lack of access to loans.



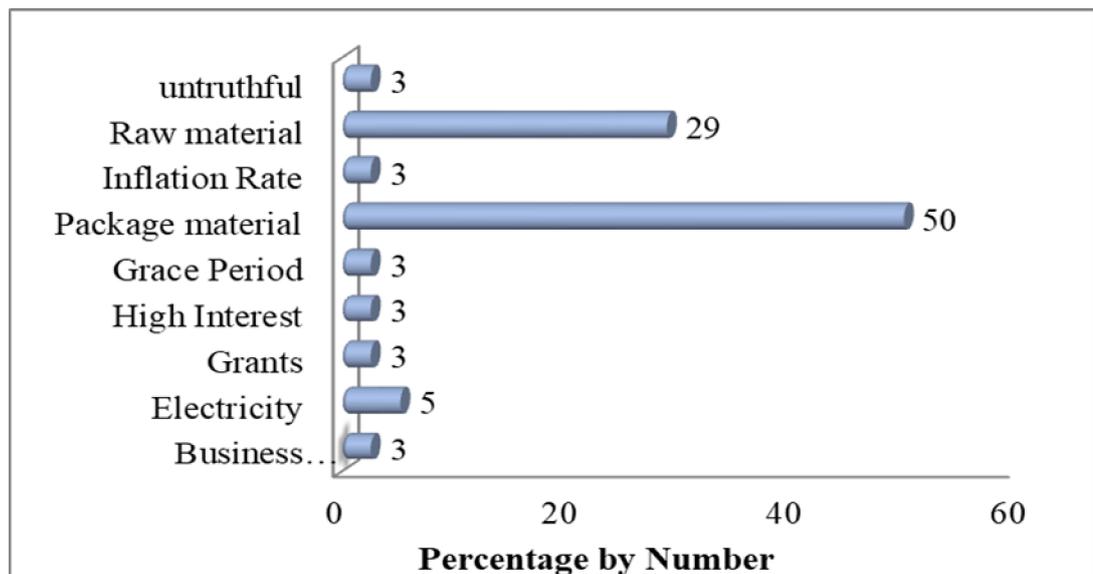
**Figure 4.19: Shortage of Finance**  
Source: researcher

Sixty two percent (62%) of the respondents are affected by the shortage of finance. This result indicates that the shortage of finance is one of the major challenges

being faced by SMEs. However, thirty eight percent (38%) are not being affected by the shortage of finance. This is in agreement with an empirical study by Ligthelm and Cant (2003) which concluded that the limited access to financial resources available to smaller enterprises compared to larger organisations has negative consequences for their growth and development.

#### 4.8 Other Challenges Faced SMEs

In order to understand challenges that might not have been asked in the questionnaire, SMEs were asked if there was anything that was not addressed in the questionnaire. The response was shown in Figure 4.20.



**Figure 4.20: Additional Challenges Faced SMEs**

**Source:** researcher

Fifty percent (50%) of the respondents felt that absence of packaging materials has a direct impact on the slow formation and poor competitiveness of their businesses. Twenty nine percent (29%) indicated that lack of raw materials resulted in the low production of levels. Three percent (3%) of the respondent reveals that business

counselling, grants, high interest rate, grace period, inflation rate and untruthful workers are among of the factors which contribute negatively to the performance of their enterprises and slow formation of competitive SMEs in Tanzania while only five percent (5%) of respondents responded that power cuts and high cost of electricity contributed to poor competitiveness of their SMEs.

Also, respondents were disappointed by the Government and its supporting bodies that are supposed to look after their interests. They mentioned that mostly these bodies interact with them is when there is a workshop. They did not find these workshops helpful because the institutions which provide workshops to the SMEs do not organise follow ups to assess how these SMEs are progressing. Another disturbing factor for SMEs was that, in some cases, workshop facilitators who are sent by the supporting bodies cannot speak the language of the community that they are addressing.

As a result, SMEs attend workshops without understanding the content, and the entire session becomes fruitless. The skills workshops that they normally present are not tailored for SMEs. They do not classify these SMEs according to their size and industry so that they can address their challenges as per industry as well as SMEs' level of growth. As a result, most SMEs do not see the importance of attending such meetings in future. There were SMEs that have tried to seek assistance from these supporting bodies, especially financial assistance. They mentioned that when they raise concerns in workshops regarding the challenges they face when requesting for funds, their concerns are not taken into considerations.

## **4.9 Qualitative Results**

The qualitative data obtained from interviews, was analysed using content analysis and the results are presented in this chapter. The objective of this chapter is to describe how enterprises behave in adopting an entrepreneurial orientation based on the interviews with SMEs owners/managers.

### **4.9.1 Financial Intermediary Role of Business Incubators**

Despite the revelation of status of the business incubation in Tanzania, the major focus of this part of research was to identify the factors that enable business incubators to successfully play the financial intermediary role between incubatees and financiers. One of the aspects of interview guide was to know the factors associated with successful financial intermediary role of a business incubator.

Majority of the interviewees mentioned the quality of incubate financial information as one of the reason why financiers consider incubatees as better candidates for loans provision. They argued that incubatees have proper financial record keeping because of the trainings and counselling they receive from the business experts provided by the incubators.

*“...the financial trainings provided to our incubatees as part of our support for their growth improve their financial record keeping and financial statements. This enables them to provide quality financial information to credit providers”*

Due to these financial trainings and counselling from business experts at the incubator, incubatees display higher financial management capabilities than non-incubated entrepreneurs. They relatively have proper financial records and their financial statements are well prepared.

*“We have a better chance of accessing credits because we have business experts who guide us during preparation of financial statements and other documents required by financiers. They usually tell us the importance of proper financial record keeping in our enterprises; this enables us to easily produce financial information whenever required”*

The incubatees are also in better position to produce sound business plans because in the whole process of writing a business plan they have guidance from incubator experts at their disposal, unlike the non-incubated entrepreneurs who have no access to such services and even if they access, the consulting services are very expensive.

*“Incubators have business experts dedicated to providing advice on financial matters and assisting incubatees to prepare business plans and other financial documents required by the financiers. This helps incubatees to have higher quality information than non-incubated entrepreneurs”*

The respondents also revealed that the special agreement between incubators and financiers where a financier is required to provide credit to the incubatees while an incubator guarantees the incubatees. In case an incubate fails to repay the loan then the incubator will have to pay. Such agreements address the problem of lack of collaterals because incubatees are given loans without requiring them to have any collateral.

*“To facilitate the easy access to credits, we have special agreements with some financiers. In such agreements, the financiers provide credits to incubatees but in case incubate fails to repay then an incubator has to pay. Our responsibility as an incubator is to make sure incubatees honour the repayment schedules”*

*“When you are in incubation premises, it is easy to get loans from financiers because the incubator guarantees you to the financiers. Financiers feel their money is much safer when incubators guarantee the incubatees”*

But even if there is no any special agreement between an incubator and a financier, still incubated entrepreneurs enjoy an indirect incubator guarantee. Having an office at the incubator facility makes financiers feel secure to provide credits to incubatees because it is very easy to make follow ups on the incubatees. An incubator has all the information about incubatees and it is difficult for an entrepreneur to abandon the affordable office at the incubator to avoid repaying the loan, because to get a chance of being incubated is not easy.

*“Incubated entrepreneurs are good borrowers because unlike many other borrowers, they can easily be traced, they are under incubator management supervision all the time and therefore the probability of honouring the repayment schedules is very high”*

#### **4.9.2 Reason for Joining Incubation Program**

The researcher also asked the interviewee what was the motivation behind joining the incubation program. Most of the respondents mentioned that it was owing to business failure and they thought that the business incubators would help to grow their businesses. One of the interviewees said:

*“We wanted to keep our expenses as low as possible, although the enterprise is growing exponentially, but we are still very green, very young at it, we didn't want to take a maximum risk, high cost working premises. We did not want to end up with whacking great premises that is empty”.*

*“I have been in business for about 4-5 years and after a significant active period I began experiencing problems in my business, then I became pregnant I had a baby and I thought I needed support.”*

Other factors that motivated the decision to locate their enterprises within the incubator included issues related to operating the enterprise from home. Participants narrated that either their home was too small for their business or that they did not have space to operate from home, implying that they would otherwise

have operated their enterprise from home if that were possible.

The participants also identified the attractiveness of the implied professionalism from operating from the business incubator rather than from a home office address as a factor in leading to their entry. As one participant described it:

*“I also think there is a credibility level for new businesses when you are trying to build the business. When my office is at the incubator premises, which actually says I am serious in being in business.”*

For this participant, the issue was that credibility, with the decision to enter the incubator indicating that the business was not a hobby, but a “proper business” operating from credible business premises.

#### **4.9.3 Marketing Support**

The researcher also asked a question with regards to the extent to which the needs of the incubators were being addressed by the incubators. Some of the responses were as follows:

*“When I joined the incubator they promised they would provide business networks and they would sell my business but I haven’t seen any of that happening. I am going to present my business to market but they are not helping out on how I present myself and are not even accompanying me, it is their duty to sell me”*

*“Because seeing other business who are in incubation problems shows me that I am not the only one facing problems in my business, I get to chat with them and share experiences.”*

#### **4.9.4 Reasons for not engaging in Formal Marketing Activities**

The main reason given by respondents for not conducting marketing activities is because owners/managers are the only person responsible for all functions in the enterprise, so their time has been fully occupied with managing technical and

managerial activities in the enterprise, leaving no time for marketing.

*“I am very busy with work. I have many buyers at the moment, so I haven’t put much attention into marketing. I don’t have time for that and I’m not enthusiastic about doing marketing.”*

*In addition to lack of time, the following causes inhibit respondents from conducting marketing activities to expand their markets.*

#### **4.9.5 Mentors**

The contact with mentors may expand incubatees’ professional network as well as provide advice based on their experiences. As mentioned by the participants, most of these mentors are in high positions in the industry and provide valuable advice due to many years of experience in the business. For example, two participants stated:

*“If anything we are getting more contacts with people (once they joined the incubator). No one is shutting us out because we are part of the incubator; it’s actually opening more doors”.*

*“It has given us a relationship in this industry that we didn’t have. It’s hard to know people who are at the very top of the industry”.*

Participants also suggested that social relationships are influenced by access to information due to the contact with a variety of mentors. These relationships allow incubates to receive advice from different mentors who might have different perspectives during the incubation process. As one participant stated:

*“You get a lot of different people so you get a lot of different ideas and concepts that you discuss. Also, a lot of different specializations so a lot of people from different points of view look at your product and give you a lot of feedback based on that”.*

#### **4.9.6 Training and Seminars**

The participant further mentioned that some professionals were hired to conduct the seminars and would only present information that would pitch the businesses

they were offering. Consequently, the participant had not developed a trustworthy relationship with such mentors. In addition, results showed that social relationships have a considerable influence on incubates' career success during and after the incubation process. Not only do these relationships provide the basic benefits of a mentor-mentored relationship, but they also help incubates make more strategic business decisions that help avoid mistakes. Mistakes are certainly setbacks and the prevalent feeling among the participants is that by avoiding mistakes they can move along faster within their careers. As enumerated by one participant:

*“Some mistakes cannot be avoided, but some mistakes can be avoided if you have the right person at right time guide you and I really believe that is what the incubator does. Instead of doing one or two collections in order to learn the right process for collection three, we are learning that during our first collection”.*

#### **4.9.7 Physical Capital**

In terms of physical capital, the data showed that workspace and equipment are highly influential for enterprise incubators due to financial issues. As many participants described, it would not be possible to maintain their businesses without the support and structure of the incubator because none of the participants could afford their own workspace nor have access to the necessary equipment. Therefore, workspace influences the participant's production quality because without this workspace incubates would not have a physical site to maintain the machinery and consequently would not have a way to develop their products.

#### **4.9.8 Challenges Faced in Running the Incubator**

In reviewing the literature, data were found on the challenges facing incubators just like any other business. In both developing and developed countries, incubators

face obstacles that prevent them from fully contributing to the success of the incubated SMEs. Drawing from the interviews, one of the business incubators faced the challenge of funding, space to do production, maintenance of machines, and entrepreneurial and technical skills. Emphasizing the challenges facing incubators, two participants stated:

*“...Our major challenge is the expansion to different areas, given that it is costly to setup up a new site and people might not participate”. Therefore, this quote indicates the challenges that are faced by incubators such as expansion to different areas.*

*“Apart from getting our client’s mind-set right, our biggest challenge is on opening doors and connecting these entrepreneurs with corporate businesses. Furthermore, we have to make sure that incubates offer high quality products or services. Lastly, the challenge this incubator had at first was that the previous manager had no experience running a business before, neither was he an entrepreneurial person, there were operation systems that were not working such as, quality process systems, procedures were compromised”. Therefore, this quote illustrates the importance of having experience to manage an incubator with entrepreneurial attributes.*

#### **4.10 Structural Equation Modelling Measurement Model**

This study was to establish the relationship between the impacts of business incubation in promoting the competitiveness of SMEs in Tanzania. The study was also to establish the best model to adopt in developing business incubators. Structural Equation Modelling (SEM) provides a pictorial representation of the model variables. Mulaik and Millsap (2000) recommends stringent four-step approach in structured equation modelling, to test the measurement model, i.e. the relationship between the manifest variables and the latent variables or constructs as specified and the relationships between them that are thought to account for a phenomenon (Sabatier, 2007).

#### 4.10.1 Relationship between Human Skills and Competitiveness of SMEs

The results presented in Table 4.13 present the fitness of model used of the regression model in explaining the study phenomena. From the results 8.4% of the variation in enterprise growth was explained by the variation in the human skills impartation strategy. Table 4.13 below depicts results on the analysis of the variance (ANOVA). The results imply that human skills impartation strategy is a good predictor of enterprise growth competitiveness. This was supported by an F statistic of 4.584 on 1 and 45 degrees of freedom with a reported p value (0.021) which was less than the conventional probability of 0.05 significance levels. This result indicates that the overall model fitted on the data was statistically significance.

**Table 4.13: Human Skills Regression Model**

| Model                    | Sum of Squares | Df                    | Mean Square | F     | Sig.  |
|--------------------------|----------------|-----------------------|-------------|-------|-------|
| Regression               | 1.892          | 1                     | 1.922       | 4.584 | 0.021 |
| Residual                 | 18.966         | 45                    | 0.527       |       |       |
| Total                    | 20.761         | 46                    |             |       |       |
| R = .321                 |                | R-Square = .084       |             |       |       |
| Adjusted R-Square = .062 |                | Durbin-Watson = 1.320 |             |       |       |

**Source:** researcher

The specific model was;  $Y = 2.691 + 0.316X_1$  Where  $X_1$  is human skills impartation strategy and Y is the Enterprise competitiveness. These results indicate that human skills impartation strategy has a significance positive effect on the enterprise competitiveness. This implies that a unit increase in human skills offered by incubators to the incubatees it leads to increase in growth of the business by a rate of 0.316.



Table 4.16 shows the results of coefficients which helps to generate the model technical skill and competitiveness  $Y = 8.916 + 0.806X_1$  which implies for every unit measure of technical skill it leads to 0.806 increase in growth rate of the business. Smallbone and Welter (2001); Hisrich and Drnovsek (2002) found that technical competencies as measured by education, technical experience, start-up experience and knowledge of the industry positively impact on the growth competitiveness of new SMEs.

In his research Bowen (2009), found that the absence of technical training is responsible for poor performance of SMEs, the findings of the research indicated that over 50% of SMEs continue to have a deteriorating performance with 3 in every 5 SMEs failing within months of establishment. Human capital theory proposes that the level of education, area of education, previous entrepreneurial experience, previous business experience and skills influence the type of venture started.

**Table 4. 16: Regression Coefficients**

| <b>Model</b>     | <b>Coefficients</b> | <b>Std. Error</b> | <b>T</b> | <b>Sig.</b> |
|------------------|---------------------|-------------------|----------|-------------|
| (Constant)       | 8.916               | 1.942             | 7.894    | .000        |
| Technical Skills | .806                | 0.271             | 6.962    | .001        |

**Source:** researcher

#### **4.10.3 Mediating Effect of Business Incubator on Technical Skills**

A regression analysis was done to determine the relationship of technical skills offered by the incubators and competitiveness of SMEs factoring in the mediating variable using the regression model  $Y = 0 + 1X_1 + 2X_6$ . Table 4.17, present a

summary of regression model results. The value of R and R<sup>2</sup> are .892 and .878 respectively. This shows that there is a positive linear relationship between technical skills offered by incubators management and growth competitiveness of SMEs in Tanzania. The R<sup>2</sup> indicates that explanatory power of the independent variables is 0.878. This means that about 87.8% of the variation in competitiveness is explained by the model.

**Table 4. 17: Technical Skills and Mediating Variable Regression Model**

| <b>Model</b>                 | <b>Sum of Squares</b> | <b>Df</b> | <b>Mean Square</b>        | <b>F</b> | <b>Sig.</b> |
|------------------------------|-----------------------|-----------|---------------------------|----------|-------------|
| Regression                   | 43373.09              | 2         | 14457.7                   | 1030.74  | 0.00        |
| Residual                     | 1683.183              | 121       | 14.02653                  |          |             |
| Total                        | 45056.272             | 122       |                           |          |             |
| R= .892                      |                       |           | R-Square = .878385        |          |             |
| Adjusted R- Square = .895157 |                       |           | Durbin-Wastson = 2.969148 |          |             |

**Source:** researcher

Table 4.18 shows the results of Coefficients to the model:  $Y = 0.163X_1 + 0.951X_6$ . The coefficients are all significant at the 0.05 level of significance since the significances 0.01, 0.01 which are all less than 0.05. Since both coefficients are significant, it implies that there is a mediating effect of business incubator on the relationship between technical skills and competitiveness of SMEs. Business incubators offered consultancy services, technical and counselling services which enhanced the human relation skill, analytical and problem solving skills of the incubatees. The findings are in line with the human capital theory where knowledge gained from education and experience is a resource to opportunity exploitation and growth competitive of the businesses (Gartner et al., 2005).

**Table 4.18: Regression Coefficients**

| Variable                   | Coefficients |            | T      | Sig.  |
|----------------------------|--------------|------------|--------|-------|
|                            | B            | Std. Error |        |       |
| Managerial skills          | 0.16284      | 0.01224    | 3.5302 | 0.01  |
| Incubatees characteristics | 0.950761     | 0.20181    | 4.1150 | 0.000 |

**Source:** researcher

The mediating effect was tested by calculating the change in R2 and the resulting P value of the F-change. The p-value of change is 0.000 which is less than 0.05 implying that the mediating effect of incubator variables is significant at 5% level of significance.

**Table 4. 19: Mediating Effect on Technical Skills**

| R2 Model 1 | R2 Model 2 | R2 Change | F Change | Sig. F Change |
|------------|------------|-----------|----------|---------------|
| 0.228      | 0.8029     | 0.8084    | 19.626   | .000          |

**Source:** researcher

#### 4.10.4 Relationship between Conceptual Skills and Competitiveness of SMEs

The results presented in Table 4.20 present the fitness of model used of the regression model in explaining the study phenomena. Conceptual Skills explained 0.8% of variation in competitiveness of SMEs in Tanzania. Thus conceptual skills does not play a significant role in determining the entrepreneurial growth and it cannot be used alone in explaining the growth among incubatees.

Table 4.20 provides the results on the analysis of the variance (ANOVA). The results imply that conceptual skills are poor predictor of enterprise competitiveness in Tanzania. This was supported by an F statistic of 0.298 and the reported p value (0.6) which was greater than the conventional probability of 0.05 significance

levels. This result indicates that the overall model fitted on the data is not statistically significant and cannot be relied in predicting enterprise growth.

**Table 4.20: Conceptual Skills Regression Model**

| Model                     | Sum of Squares | Df                    | Mean Square | F     | Sig.  |
|---------------------------|----------------|-----------------------|-------------|-------|-------|
| Regression                | 0.139          | 1                     | 0.137       | 0.298 | 0.621 |
| Residual                  | 20.941         | 121                   | 0.419       |       |       |
| Total                     | 21.083         | 122                   |             |       |       |
| R= .0075                  |                | R-Square = .009       |             |       |       |
| Adjusted R- Square = .026 |                | Durbin-Watson = 1.538 |             |       |       |

**Source:** researcher

In the Table 4.21, the specific model was;  $Y=3.939 - 0.247X_5$  Where  $X_5$  is conceptual skills and  $Y$  is enterprise competitiveness. These results indicate that conceptual skills have no significant effect on enterprise competitiveness. This is supported by a p-value of 0.621 which is greater than the conventional probability of 0.05.

**Table 4.21: Regression Coefficients**

| Model             | Coefficients | Std. Error | T       | Sig. |
|-------------------|--------------|------------|---------|------|
| (Constant)        | 3.939        | 2.041      | 5.016   | .000 |
| Conceptual Skills | - 0.247      | 0.373      | - 0.748 | .621 |

**Source:** researcher

#### 4.10.5 Structural Capital and Competitiveness of SMEs

The researcher also tested the association between dependent variable competitiveness of SMEs business performance and independent variable structural capital as depicted in Table 4.22. The coefficient of determination ( $R^2$ ) and

correlation coefficient (R) shows the degree of association between structural capital and competitiveness of SMEs. The results of the linear regression indicate that  $R = .515$  and  $R^2 = .189$  this is an indication that there is a positive linear relationship between structural capital and competitiveness of SMEs in Tanzania. The  $R^2$  indicates that explanatory power of the independent variables. This means that 18.9% of the variation in competitiveness is explained by the model fitted and that the remaining 83.8% of the variation in the dependent variable is explained by other factors.

**Table 4.22: Structural Capital Regression Model**

| Model                         | Sum of Squares | Df  | Mean Square           | F    | Sig.  |
|-------------------------------|----------------|-----|-----------------------|------|-------|
| Regression                    | 3.621          | 1   | 4.013                 | .201 | 0.002 |
| Residual                      | 2247.561       | 123 | 17.934                |      |       |
| Total                         | 2301.316       | 121 |                       |      |       |
| R = .515      R-Square = .189 |                |     |                       |      |       |
| Adjusted R-Square = .163      |                |     | Durbin-Watson = 1.421 |      |       |

**Source:** researcher

The ANOVA test results reveals that structural capital have significant effect on competitiveness of SMEs in Tanzania since the P value is actually 0.002 is less than 5% level of significance. This is depicted by linear regression model  $Y = 0 + 2X_2 + e$  where  $X_2$  is the structural capital the P value were 0.000 implying that the model was significant. The findings showed that there was a definite link between ones access to structural capital and the start-up and success of business. These findings agree with Hisrich (2011) that financial capital is one of the ingredients enabling businesses to start, expand, remain viable and become sustainable.

**Table 4.23: Regression Coefficients**

| <b>Model</b>       | <b>Coefficients</b> | <b>Std. Error</b> | <b>T</b> | <b>Sig.</b> |
|--------------------|---------------------|-------------------|----------|-------------|
| (Constant)         | 18.916              | 2.532             | 7.253    | .000        |
| Structural Capital | .356                | 0.162             | 1.234    | .002        |

**Source:** researcher

Table 4.23 also shows the results of coefficients. The results helps to generate the model structural capital and competitiveness  $Y=18.916 + 0.356X_2$ . From the analysis findings, structural capital offered to SMEs help in improving competitiveness of the businesses. The importance of financial resources for SMEs is obvious: it helps to retain profits, grants, loans and equity, obtained from a range of sources including self, banks, venture capitalists, Government agencies and so on (Oswald, 2003). It has also been argued that putting more money into start-ups is more costly than helping established SMEs to grow faster.

#### **4.10.6 Mediating Effect of Business Incubator on Structural Capital**

A regression analysis was done to determine the effect of financial structural capital offered by the business incubators on business competitiveness factoring in the mediating variable using the regression model  $Y= \beta_0 + \beta_1X_2 + \beta_2X_5$ . Table 4.24 present a summary of regression model results. The value of R and R<sup>2</sup> are .855 and .892 respectively. This shows that there is a positive linear relationship between structural capital services offered by incubators and competitiveness of SMEs in Tanzania. The R<sup>2</sup> indicates that explanatory power of the independent variables is 0.892. This means that 89.2% of the variation in growth is explained by the model. The value of the power of the independent variables R<sup>2</sup> implies that the predictors of the capital structural services influenced competitiveness.

**Table 4.24: Structural Capital and Mediating Variables Regression Model**

| Model                     | Sum of Squares | Df                     | Mean Square | F    | Sig.  |
|---------------------------|----------------|------------------------|-------------|------|-------|
| Regression                | 4331.01        | 1                      | 4.013       | .201 | 0.002 |
| Residual                  | 2153.213       | 121                    | 17.934      |      |       |
| Total                     | 46032.651      | 123                    |             |      |       |
| R= .855                   |                | R-Square = .892        |             |      |       |
| Adjusted R- Square = .967 |                | Durbin-Wastson = 1.223 |             |      |       |

**Source:** researcher

The ANOVA in Table 4.24 shows an F statistic that has a significance level of 0.002. This shows that the coefficients of the equation fitted are jointly not equal to zero implying a good fit. Also Table 4.25 shows the results of coefficients to the model:  $Y = 0.947X_2 + 1.863X_6$  The coefficients and constant term are all significant at the 0.05 level of significance since the significances 0.000 and 0.002 which are all less than 0.05.

**Table 4.25: Regression Coefficients**

| Variable           | Coefficients |            | T        | Sig. |
|--------------------|--------------|------------|----------|------|
|                    | B            | Std. Error |          |      |
| Structural Capital | 0.946651     | 0.095721   | 11.86714 | 0.00 |
| Business Incubator | 1.863173     | 0.387513   | 8.164303 | 0.02 |

**Source:** researcher

The mediating effect was tested by calculating the change in R<sup>2</sup> and the resulting P value of the F-change. The p-value of change is 0.039 which is less than 0.05 implying that the mediating effect of incubates characteristics is significant at 5%

level of significance. This is a strong indication of the importance of access to timely finances for a business. The incubator manager should organise for a variety of structural capital services to incubatees business ventures to improve their performance level. Other researcher also have got supporting positions to the one held by this study for instance Lalkaka and Abetti (1999) holds that for business ventures to be profitable, or even be simply self-sustainable, business incubators should carefully design a revenue generation model containing more than one source or stream, of revenue.

#### **4.11. BIs in Promoting the Competitiveness of SMEs**

Structural equation models are fitted using maximum likelihood estimation (MLE) (Leedy and Ormrod, 2013). The estimations are therefore based on various estimation classical assumptions (Pallant, 2010; Leedy and Ormrod, 2013). Statistical assumptions were tested to establish if the data met the sampling adequacy, independence, normality, reliability, multicollinearity and heteroscedasticity assumptions, and it was on the basis of these results, that the measures of central tendency, dispersion, tests of significance, tests of associations and prediction were performed.

##### **4.11.1 Sampling Adequacy**

In order to ensure sampling adequacy and significance of data, two test namely Kaiser-Meyer-Olkin measures of sampling adequacy(KMO) and Bartlett's test of sphericity has been applied to test whether the relationship among the variables has been significant or not as shown in below. The Kaiser-Meyer-Olkin measures of

sampling adequacy shows the value of test statistic as  $0.687 > 0.5$ . Bartlett's test of sphericity is used to test whether the data is statistically significant or not. With the value of test statistic and the associated significance level, it shows that there exists a relationship among variables.

Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was conducted to confirm whether there is a significant correlation among the variables to warrant the application of Exploratory Factor Analysis (EFA) (Snedecor and Cochran, 1989). The KMO statistics vary between 0 and 1 (Argyros, 2005). A value of zero indicates that the sum of partial correlation is large relative to the sum of correlations indicating diffusions in the patterns of correlations, and hence, factor analysis is likely to be inappropriate (Costello and Osborne, 2005). A value close to 1 indicates that the patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors (Cooper and Schindler, 2011).

**Table 4.26: KMO and Bartlett's Test**

| Test   | Value   |
|--|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | 0.687   |
| Approx. Chi-Square                               | 795.179 |
| Bartlett's Test of Sphericity                    | Df      |
|  | 16      |
|  | Sig.    |
|  | .000    |

**Source:** researcher

#### 4.11.2 Test of Independence

Independence of error terms, which implies that observations are independent, was assessed through the Durbin-Watson test. Durbin Watson (DW) test check that the residuals of the models were not auto correlated since independence of the residuals is one of the basic hypotheses of regression analysis. Its statistic ranges

from zero to four. The calculated Durbin-Watson statistic is compared to the tabulated Durbin Watson statistics for a model with four predictors excluding the intercept and sample size of 137. The calculated Durbin Watson statistic is higher than the upper limit of the tabulated value that shows non autocorrelation implying independence.

**Table 4.27: Durbin Waston Results**

| <b>Durbin Watson Statistic</b> | <b>Lower Limit</b> | <b>Upper Limit</b> |
|--------------------------------|--------------------|--------------------|
| 1.964                          | 1.842              | 1.912              |

**Source:** researcher

#### **4.11.3 Test of Normality**

Statistical maximum likelihood estimation assumes that the residuals of fitted model follow normal distribution. The Shapiro Wilk test was used to examine the normality for the residuals of the variables under discussion. Critical to the debate is the fact that the test for normality could be checked using the Shapiro Wilk's test or the Kolmogorov-Smirnov tests could be used to check for normality. However, as Chattefuee and Hadi (2006) argue, the Kolmogorov-Smirnov should be used when the number of observations is greater than 2000. The author also reveals that the Shapiro Wilk's tests should be used when the number of observations is less than 2000, which explains why the latter test was used. The results in Table 4.28 indicate that residuals of the variables came from a normal distribution because the p value is greater than 0.05 in all cases.

**Table 4.28: Test for Normality**

| <b>Variable</b>         | <b>Shapiro – Wilk Statistic</b> | <b>Sig.</b> |
|-------------------------|---------------------------------|-------------|
| Human Skills            | 0.921                           | 0.269       |
| Technical Skills        | 0.894                           | 0.194       |
| Conceptual Skills       | 0.969                           | 0.081       |
| Structural Capital      | 0.891                           | 0.371       |
| Basic Services          | 0.793                           | 0.679       |
| Advanced Level Services | 0.781                           | 0.941       |
| Financial Help          | 0.991                           | 0.752       |
| Market Linkages         | 0.819                           | 0.184       |
| Competitiveness Of SMEs | 0.753                           | 0.201       |

**Source:** researcher

#### 4.11.4 Test of Reliability

The reliability of an instrument refers to its ability to produce consistent and stable measurements. This implies that the results of the study can be replicated using the same methodology and instrument (Saunders et al., 2012; Kothari, 2009). Threats to reliability may result from instrument error, observer error or respondent error (Robson, 2002). Bagozzi (1994) explains that reliability can be seen from two sides: reliability (the extent of accuracy) and unreliability (the extent of inaccuracy). The most common reliability coefficient is the Cronbach's alpha which estimates internal consistency by determining how all items on a test relate to all other items and to the total test - internal coherence of data. The reliability is expressed as a coefficient between 0 and 1.00. The higher the coefficient, the more reliable is the test.

Cronbach Alpha value which is widely used to verify the reliability of the constructs was used to test the reliability of the proposed constructs. All constructs depicted that the value of Cronbach's Alpha are above the suggested value of 0.7 thus the study was reliable (Nunnally and Bernstein, 2009). On the basis of reliability test it was supposed that the scales used in this study is reliable to

capture the constructs. Reliability of the constructs is shown in Table 4.29.

**Table 4.29: Reliability Tests Results**

| <b>Variables</b>        | <b>Cronbach's Alpha</b> | <b>Conclusion</b> |
|-------------------------|-------------------------|-------------------|
| Competitiveness         | 0.831                   | Accepted          |
| Human Skills            | 0.927                   | Accepted          |
| Technical Skills        | 0.716                   | Accepted          |
| Conceptual Skills       | 0.781                   | Accepted          |
| Structural Capital      | 0.929                   | Accepted          |
| Basic Services          | 0.902                   | Accepted          |
| Advanced Level Services | 0.872                   | Accepted          |
| Financial Help          | 0.862                   | Accepted          |
| Market Linkages         | 0.916                   | Accepted          |

**Source:** researcher

All the variables in the study were found to be uni-dimensional and valid indicators of the constructs they were to measure. Sangoseni et al., (2013) proposed value of Cronbach's Alpha of greater than 0.716 as shown in table 4.29. This is a significant level for inclusion of an item into the study. All constructs were considered appropriate as the items measuring all resulted to above 0.7 as shown in Table 4.29. Ogutu and Kihonge (2016) in their study on the impact of business incubators on economic growth and entrepreneurship development used factor analysis to measure construct validity and observe how well the individual measures reflected their constructs.

#### **4.11.5 Test of Multicollinearity**

A situation in which there is a high degree of association between independent variables is said to be a problem of multi-collinearity which results into large standard errors of the coefficients associated with the affected variables. Mugenda and Mugenda (2012) noted that multi-collinearity can occur in multiple regression models in which some of the independent variables are significantly correlated

among themselves. In a regression model that best fits the data, independent variables correlate highly with dependent variables but correlate, at most, minimally with each other. According to Lind (2002) Multi-collinearity can also be solved by deleting one of the highly correlated variables and re-computing the regression equation. The pilot data was tested for multicollinearity of the accepted variables.

From the Table 4.30 the tolerances are all above 0.2 if a variable has collinearity tolerance below 0.2 implies that 80% of its variance is shared with some other independent variables. The Variance Inflation Factors (VIFs) are all below 5. The VIF is generally the inverse of the tolerance. Multicollinearity is associated with VIF above 5 and tolerance below 0.2. The accepted variables were therefore determined not to exhibit multicollinearity and acceptable for data collection and analysis.

**Table 4.30: Multicollinearity**

| <b>Variables</b>        | <b>Tolerance</b> | <b>VIF</b> |
|-------------------------|------------------|------------|
| Human Skills            | 0.564            | 1.721      |
| Technical Skills        | 0.489            | 2.573      |
| Conceptual Skills       | 0.432            | 2.885      |
| Structural Capital      | 0.561            | 1.656      |
| Basic Services          | 0.481            | 1.936      |
| Advanced Level Services | 0.495            | 1.658      |
| Financial Help          | 0.514            | 1.791      |
| Market Linkages         | 0.503            | 1.992      |

**Source:** researcher

#### **4.11.6 Test of Heteroscedasticity**

Heteroscedasticity was tested to establish whether the model residuals are homoscedastic. The statistical modelling assumes that the model residuals are homoscedastic. Homoscedasticity of the residuals refers to constant variance of the

residuals. To test for Heteroscedasticity, the Breusch-Pagan test. The BP lagrange multiplier (LM) statistic was computed for the residuals. The BP and Koenker tests the hypothesis that H0: residuals do not exhibit heteroscedasticity (residuals are homoscedastic). The P-value of the BP-LM test were greater than 0.05 implying that the residuals do not exhibit heteroscedasticity thus meeting the homoscedasticity assumption.

**Table 4.31: Heteroscedasticity Results**

|         | <b>LM</b> | <b>Sig</b> |
|---------|-----------|------------|
| BP      | 3.751     | 0.219      |
| Koenker | 3.498     | 0.352      |

**Source:** researcher

#### **4.12 Moderating Effect of Business Incubator on the Relationship between Managerial Skills and Competitiveness of SMEs**

Further to the objectives on the role of business incubators in the industrialization process and the best model to adopt in developing business incubators in Tanzania, a joint effect of managerial skills was tested by fitting a hierarchical moderated regression model considering the joint effect of all the three managerial skills (human skills, technical skills, conceptual skills and structural capital). In step one; human skills, technical skills, conceptual skills and structural capital were regressed as predictors on competitiveness of SMEs.

In step two the moderating variable business incubator (basic and advanced level services, financial help and market linkages) was introduced to the model and finally in step three, interaction terms between business incubator and managerial skills were introduced. The results for this moderated multiple regressions are presented in Table 4.32.

The results show that model 1 has an R-square of 0.529 which showed that 52.9% of the variation in competitiveness of SMEs (dependent variable) is explained by the variation of managerial skills (independent variables) in the model. The model is generally significant based on the ANOVA F statistic with a p-value of 0.000 which is less than 0.05. On introducing the moderating variables (business incubator), the model experienced a change in R-square of 0.336. The change in R-square was significant as shown by the significant change in F with a p-value of 0.001 which is less than 0.05.

The change in R-square shows that there is a significant 33.6% increase in the variation of performance of competitiveness of SMEs by the predictors in the model due to addition of business incubator to the model. Addition of the interaction variables between business incubator and managerial skills enhance a significant change in R-square. The R-square change was 0.129 with a p-value of 0.006 which is less than 0.05. This shows that adding managerial skills to the model causes a significant increase of 12.9% in variation of performance of SMEs competitiveness.

**Table 4. 32: Model Summary for the Overall Model**

| Model | R     | R Square | Adjusted R Square | Std. Error | R Square Change | F Change | df 1 | df 2 | Sig. F Change |
|-------|-------|----------|-------------------|------------|-----------------|----------|------|------|---------------|
| 1     | .789a | 0.562    | 0.529             | 0.774      | 0.562           | 13.051   | 3    | 46   | 0.000         |
| 2     | .964b | 0.816    | 0.702             | 0.642      | 0.336           | 37.163   | 1    | 45   | 0.001         |
| 3     | .919c | 0.849    | 0.737             | 0.508      | 0.129           | 4.825    | 3    | 45   | 0.006         |

a. Predictors: (Constant), Human Skills, Technical Skills, Conceptual Skills and Structural Capital

b. Predictors: (Constant), Human Skills, Technical Skills, Conceptual Skills and Structural Capital, Business Incubator

c. Predictors: (Constant), Human Skills, Technical Skills, Conceptual Skills and Structural Capital, Business Incubator,  $X_1Z$ ,  $X_2Z$ ,  $X_3Z$

This also further showed that considering the joint effect model with all the three dimensions of managerial skills as independent variables in the model, business incubator has a significant moderating effect on the relationship between managerial skills and competitiveness of SMEs.

Table 4.33 shows the model coefficients of models 1, 2 and 3 of this stepwise regression model. Model 1 results show that human skills ( $\beta = 1.394$ ,  $t = 3.806$ ,  $p < .05$ ), technical skills ( $\beta = 0.873$ ,  $t = 2.431$ ,  $p < .05$ ) and structural capital ( $\beta = 1.974$ ,  $t = 1.247$ ,  $p < .05$ ), have positive significant influences on competitiveness of SMEs. They both have coefficient estimates with p-values that are less than 0.05 implying significance at the 0.05 level of significance. Increasing the level of human skills, technical skills and structural skills by a unit causes an increase in the levels of SMEs competitiveness by 1.394, 0.873 and 1.974 units respectively. According to this joint effect model, conceptual skills which are also a dimension of managerial skills had no significance influence on competitiveness of SMEs ( $\beta = -0.165$ ,  $t = -0.268$ ,  $p > .05$ ). Conceptual skills had a coefficient estimate with a p-value of 0.736 which is greater than 0.05 implying that the joint effect model, conceptual skills had no significant influence on competitiveness of SMEs. The equation generated from model 1 becomes;

$$Y = 0.000 + 1.394X_1 + 0.873X_2 - 0.165X_3 + 1.974X_4 \dots\dots\dots\text{Equation 4.9}$$

Model 2 shows that adding business incubator to the model had a significant effect. The coefficient of business incubator in the model was significant at 0.05 level of significance ( $\beta = 0.896$ ,  $t = 4.858$ ,  $p < .05$ ) showing that business incubator had a significant influence on competitiveness of SMEs. The equation generated from

model 2 is given by;

$$Y = 0.000 + 1.471X_1 + 0.862X_2 + 0.365X_3 + 1.843X_4 + 0.896Z \dots\dots\text{Equation 4.9}$$

According to model three, adding the interaction term to the model yielded a significant improvement to the model as shown by the significant change in R-square. The interaction term between business incubator and human skills ( $\beta = 1.384$ ,  $t = 3.142$ ,  $p < .05$ ), technical skills ( $\beta = 1.461$ ,  $t = 3.084$ ,  $p < .05$ ), structural capital ( $\beta = 1.394$ ,  $t=2.975$ ,  $p < .05$ ) both exhibit a positive significant influence on competitiveness of SMEs. The p-values of these interaction terms according to this model were found to be 0.01, 0.008 and 0.00 respectively which are both less than 0.05 implying significance influences to SMEs competitiveness.

**Table 4.33: Coefficients for the Overall Model**

| Model            | Variables           | Un- Standardized Coefficients<br>$\beta$ | Std. Error | Standardized Coefficients $\beta$ | t      | Sig   |
|------------------|---------------------|--|------------|-----------------------------------|--------|-------|
| 1                | (Constant)          | 0.000                                    | 0.056      |                                   | 0.000  | 1.000 |
|                  | Human Skills        | 1.394                                    | 0.357      | 1.394                             | 3.806  | 0.001 |
|                  | Technical Skills    | 0.873                                    | 0.314      | 0.873                             | 2.431  | 0.004 |
|                  | Conceptual Skills   | -0.165                                   | 0.276      | -0.165                            | -0.268 | 0.736 |
|                  | Structural Capital  | 1.974                                    | 0.838      | 1.974                             | 1.247  | 0.003 |
| 2                | (Constant)          | 0.000                                    | 0.085      |                                   | 0.000  | 1.000 |
|                  | Human Skills        | 1.471                                    | 0.357      | 1.471                             | 3.769  | 0.002 |
|                  | Technical Skills    | 0.862                                    | 0.253      | 0.862                             | 3.748  | 0.000 |
|                  | Conceptual Skills   | -0.365                                   | 0.238      | -0.365                            | -2.205 | 0.137 |
|                  | Structural Capital  | 1.843                                    | 0.639      | 1.843                             | 4.241  | 0.001 |
| 3                | Business Incubation | 0.896                                    | 0.176      | 0.893                             | 4.858  | 0.000 |
|                  | (Constant)          | 2.851                                    | 0.498      | 2.851                             | 3.146  | 0.001 |
|                  | Human Skills        | 1.802                                    | 0.847      | 1.802                             | 2.576  | 0.002 |
|                  | Technical Skills    | 1.274                                    | 0.265      | 1.274                             | 3.674  | 0.000 |
|                  | Conceptual Skills   | -0.396                                   | 0.276      | -0.396                            | -2.863 | 0.003 |
|                  | Structural Capital  | 1.982                                    | 0.978      | 1.982                             | 3.481  | 0.000 |
|                  | Business Incubation | 0.837                                    | 0.246      | 0.837                             | 3.489  | 0.000 |
|                  | X <sub>1</sub> Z    | 1.384                                    | 0.465      | 3.716                             | 3.142  | 0.010 |
|                  | X <sub>2</sub> Z    | 1.461                                    | 0.439      | 3.871                             | 3.084  | 0.008 |
| X <sub>3</sub> Z | 1.144               | 0.639                                    | 2.942      | 0.985                             | 0.071  |       |
| X <sub>4</sub> Z | 1.394               | 0.731                                    | 1.394      | 2.975                             | 0.000  |       |

**Source:** researcher

The interaction term between business incubator and conceptual skills ( $\beta = 1.144$ ,  $t = 0.985$ ,  $p > .05$ ) which reveals that there is no significant influence on competitiveness of SMEs. The p-value of the interaction term according to this model was found to be 0.071 which is greater than 0.05 implying insignificance influences on competitiveness of SMEs. The equation generated from model 3 is given by;

$$Y = 2.851 + 1.802X_1 + 1.274X_2 + 0.396X_3 + 1.982X_4 + 0.837Z + 1.384X_5 * Z + 1.461X_6 * Z + 1.144X_7 * Z + 1.394X_8 * Z + 0.498 \dots \dots \dots \text{Equation 4.9}$$

**4.12.1 The Optimal Model**

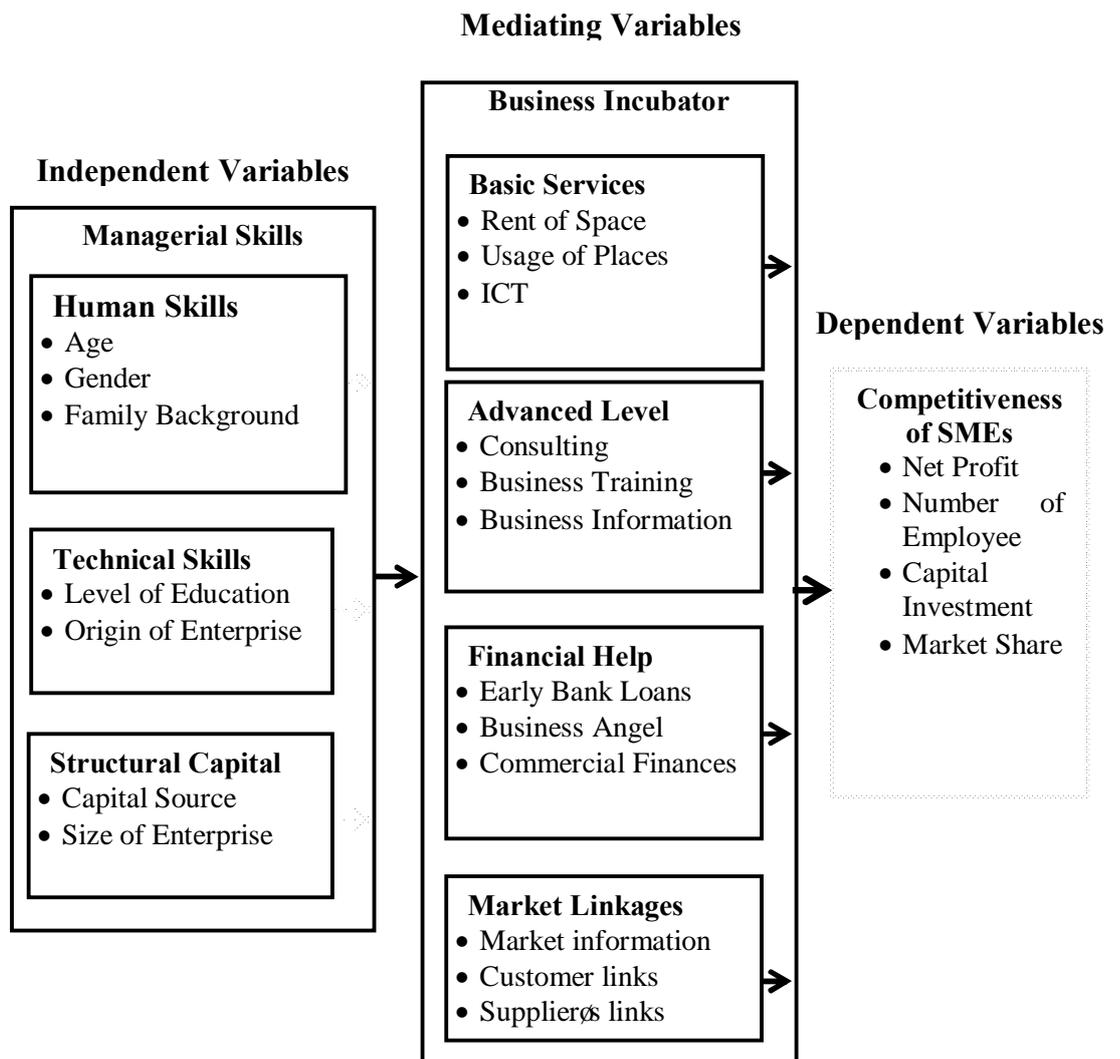
Further to the results in Table 4.34 a regression analysis was done dropping the insignificant independent variable conceptual skills. This results to an optimal regression model  $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4Z + \beta_5X_i Z +$

The result of the analysis shown in Table 4.34 shows the independent variables contributed to the competitiveness of SMEs. The results helps to generate the model incubator services and growth of SMEs  $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_4 + \beta_4Z + \beta_5X_i Z +$ . Therefore the statistical values obtained in Table 4.34 is  $Y = 3.147 + 1.675X_1 + 1.448X_2 + 1.928X_4 + 0.962Z + 1.673X_5 * Z + 1.584X_6 * Z + 1.802X_8 * Z + 0.501$  where  $X_1$  and  $X_5$  is human skills,  $X_2$  and  $X_6$  is technical skills,  $X_4$  and  $X_8$  is structural skills,  $Z$  is errand  $Y$  is competitiveness of SMEs. From the research findings above, the revised conceptual framework is as in Figure 4.21. The p-values of these interaction terms according to this model were found to be 0.000, 0.001, 0.000, 0.000, 0.01, 0.004 and 0.000 respectively which are both less than 0.05 implying significance influences on competitiveness of SMEs.

**Table 4. 34: Coefficients for the Optimal Model**

| Variables           | Un- Standardized Coefficients |            | Standardized Coefficients $\beta$ | t     | Sig   |
|---------------------|-------------------------------|------------|-----------------------------------|-------|-------|
|                     | $\beta$                       | Std. Error |                                   |       |       |
| (Constant)          | 3.147                         | 0.501      | 3.147                             | 3.236 | 0.000 |
| Human Skills        | 1.675                         | 0.784      | 1.665                             | 2.346 | 0.000 |
| Technical Skills    | 1.448                         | 0.289      | 1.448                             | 3.476 | 0.001 |
| Structural Capital  | 1.928                         | 0.971      | 1.998                             | 3.586 | 0.000 |
| Business Incubation | 0.962                         | 0.467      | 0.962                             | 3.648 | 0.000 |
| X <sub>1</sub> Z    | 1.673                         | 0.484      | 3.673                             | 3.356 | 0.010 |
| X <sub>2</sub> Z    | 1.584                         | 0.481      | 1.852                             | 3.653 | 0.004 |
| X <sub>3</sub> Z    | 1.802                         | 0.858      | 1.748                             | 2.989 | 0.000 |

Source: researcher

**Figure 4.21: Revised Conceptual Framework**

## **CHAPTER FIVE**

### **DISCUSSION AND CONTRIBUTIONS OF THE STUDY**

#### **5.1 Introduction**

Under this section, a discussion of the findings was carried out in accordance with the study objectives. Here the research sought support for the findings from the already existing literature of the earlier works conducted by other researchers on the study variables. This is followed by a discussion of the contributions of the study findings in relation to the theory and practice.

#### **5.2 Analysis of Interviews**

The interview questions were designed to align with the four research questions of this study. The above-mentioned questions were further simplified into sub-questions for discussion with interviews. The data analysis strategy used was based on the creation of themes and sub-themes from the main research questions and sub-questions. The coding of interview data into themes and sub-themes was discussed in the method of analysis applied (Bradley et al., 2007). The purpose is to unify concepts by characterising them into general insights from the data analysis. The themes were derived from personal interviews.

#### **5.3 Response Rate**

In total, 137 responses were obtained. This represented a response rate of 97% when measured by the 150 questionnaires that were administered. This percentage is rated as very good and adequate for analysis. A response rate of 50% is adequate, 60% is good and 70% and above is very good (Mugenda and Mugenda, 2003). The recorded high response rate can be attributed to the data collection

procedures, where the researcher utilized an interviewer administered questionnaire. On completing the questionnaire, the researcher picked shortly after and made follow up calls to clarify queries as well as prompt the respondents to fill the questionnaires. This method usually has a higher response rate than a self-administered questionnaire (Bechhofer and Paterson, 2008).

#### **5.4 Gender Distribution**

Of the total incubated businesses 60 percent were men and 40 percent were women, of the total non-incubated businesses 61 percent were men and 39 percent were women. Multiple regression models show that gender of the entrepreneur does not exert any influence on the business competitiveness of the SMEs. The lack of female entrepreneurs may be due to cultural or normative beliefs about a woman's role in society in the study area, or it may be due to the fact that the business environment is less accommodating to female-owned businesses. This reflects findings from other studies which show that males participate more in the manufacturing sector than in sectors such as food-vending or garment-making in Tanzania (Rutashobya, 1995).

Dzansi (2004) in a study on SMEs in South Africa also found that most SMEs (55%) in South Africa are owned by males while only 45% are owned by females. Similarly, Botha et al., (2006) in a study of SMEs in South Africa also found that most SMEs were owned/ managed by males (80%) while only 20% were owned/managed by females. Weber and Schaper (2003) also found that there are more male SME owners in Australia than female SME owners. The results

indicated that approximately 67% of all SME owners are male while only 33% are female in Australia. Hence, Gwija, *et al.*, (2014) advance the view that efforts should be made to narrow the gap between participation of males and females and the latter should be motivated to start small businesses.

### **5.5 Age of Respondents**

From the study, most of the SME owners/managers were aged between 30 to 39 years from incubated business followed by 40 to 49 from non-incubated business and further showed that age of entrepreneur had positive influence to the perceived business competitiveness of the SMEs. This reflects findings from other studies which show that the entrepreneurs' ages in Tanzania generally lie between 25 to 39 years (Mlingi, 2000). Also are consistent with studies conducted by Islam *et al.*, (2011), Masutha and Rogerson (2015) who, in their study on the success of SMEs in Bangladesh, found that approximately 49% of SME owners are between the ages of 31 to 40 years.

### **5.6 Level of Education**

The results of the findings indicated that most of the respondents (40 and 37.7) in incubated and non-incubated had primary school education although in multiple regression analysis reveals that education level of the respondents had positively influenced the perceived business competitiveness of the SMEs. This is not surprising in Tanzania because other studies have found similar results suggesting that typically most SMEs are owned by people with low levels of education (Kristiansen *et al.*, 2005; Kimeme, 2005). This is largely caused by the fact that most of the people with better education have a wider choice of occupations. Olomi

(2009) argued that less well educated people in developing countries find it difficult to secure paid jobs, and are therefore forced to opt for self-employment as the only means for their survival. This implies the majority of SMEs responded during the study believes that small business enterprises and other venture as the last resort for them to earn a livelihood.

### **5.7 Vocational Training**

It has also been demonstrated that vocational training influences the formation and growth of competitive SMEs (Pankhurst, 2010). In this study, a minority of the respondents had attended the vocational training. Specifically, the researcher found that entrepreneurs who have obtained metal work fabrication training offered by various vocational training were more likely to see their businesses grow in terms of sales and assets. This study is also consistent with an African study conducted by McPherson (2003) in which it was found that entrepreneurs with vocational training had firms that grew faster than firms run by entrepreneurs without such training.

### **5.8 Length Time in Operation**

Another interesting finding was the significant influence of previous experience on the growth of SMEs. The majority of respondents (48%) had 4 to 7 years of experience while a minority (14%) had above 12 years of experience. In particular, this study suggests that respondent who had previous experience in the same industry in which the current business is based were more likely to see their business growing in terms of sales, assets, and employment. These results support

the findings from previous studies in which work experience in the same sector seems to create the knowledge and skills which are needed in order to run a firm successfully (Dobbs and Hamilton 2007; Unger et al., 2009).

### **5.9 Family Background**

It is suggested that individuals whose parents or close relatives were/are self-employed are not only likely to operate a business, but also to outperform others (Shane, 2007; Sørensen, 2007). In this study, the researcher also found that 43.2 and 36.5 percent of incubated and non-incubated business came from an entrepreneurial family. Furthermore, the study reveals that entrepreneurs who came from entrepreneurial families are more likely to experience growth in their businesses than people without such a background. This is consistent with the contention that children of entrepreneurs are more likely to become successful businesses owners than children of other people (Rose et al., 2006; Meccheri and Pelloni, 2006; Mungai and Velamuri, 2010).

These SMEs are more likely to be successful in their businesses because they have been raised in an environment that facilitates a process of human capital accumulation. Indeed, entrepreneurs raised in an entrepreneurial family background are aware of the challenges they will have to face and are better prepared to seek and find solutions to the problems or challenges that will arise. Apart from the knowledge accumulation, they may also have easier access to informal and formal networks of suppliers, clients and venture capitalists of which they can take advantage.

### **5.10 Establishment of the Enterprises**

The majority of the respondents, 63.3 and 51.9 percent had been in operation for 1 to 4 years. The study reveals that most of SMEs have failed to exist for five years after establishment. Barton and Gordon (2000) also conclude that because most SMEs face various challenges, they face weak performance, financial constraints and an inability to grow. With the high failure rate of SMEs, an SME established today will most likely not be around after 4 years. Rungani (2009) also found that in South Africa, most SMEs (70%) are between the ages of 0 - 5 years.

### **5.11 Forms of Ownership**

From the study, 85.7 and 85 percent of the respondents in non-incubated and incubated business perspectives are sole proprietorships. This result indicates that most of the SMEs are sole proprietorships and partnerships. This could be attributed to the fact that sole proprietorships are easy to form. The result is consistent with the study by Rwigema and Karungu (1999) which established that seventy-four percent (74%) of the respondents surveyed in the study of small firms are sole proprietorships, five percent (5%) close corporations and one percent (1%) is a cooperative company.

Cronje, *et al.* (2004) point out that a sole proprietorship is by far the most popular form of business enterprises. This study also finds out that the process, bureaucracy; high cost of registering and formalising a business has forced many small scale industries to operate as sole proprietors rather than limited liability companies or partnership. A sole proprietorship is a business that is owned and managed by one individual. It is a simple form of business and the least costly form

of ownership for starting an enterprise.

### **5.12 Source of Capital**

The majority of respondents 97.4 and 88.3 percent of the respondents in non-incubated and incubated business respectively started their businesses using capital from their own sources. The study noted that size of the seed capital had positive influence to the competitiveness of SMEs. Many studies have shown that most of the SMEs lack access to finance for starting, operating and expanding their businesses, therefore access to finance is always quoted as a major constraint impacting the competitiveness of SMEs and can seriously affect their ability to survive, upgrade the technology in their business, increase their capacity and even in many cases, expand their market, improve management system or increase productivity as well as profitability.

Similarly, *et al.*, (1999) found that in Tanzania, it is well known that access to finance is a major problem for many SMEs; they seriously hinder the ability of the small firms to increase their capacity, survive as well as upgrading of their businesses. However, lack of access to formal finance is still a major element crippling the ability of a business to operate effectively, to purchase materials and services most economically, to modernize or expand the business as well as maintaining or replacing machinery.

Fatoki and Odeyemi (2010) found that in South Africa only 27% of SMEs had access to bank loans while 73% did not have access to finance despite applying for a bank loan. This high rate of failure to obtain bank loans is attributed to lack of

collateral and weak managerial competencies of the SME owner/manager. Similarly, the World Bank (2010) also found that in China, only 20% of SMEs have had access to overdraft, a line of credit or bank loan. SMEs with their weak collateral, high failure rate and the information asymmetries that exist between banks and the SMEs are risky borrowers (Ebben and Johnson, 2006). Therefore, in the absence of explicit guarantees, are not willing to lend money to SMEs and thus the high rate of small enterprises that do not have access to bank loans.

It has also been established that financial institutions are not willing to lend to SMEs because they perceived the sector as high risk, and hence the need for security to cover the loan. However, these financial institutions do not seem to have all the necessary competencies to evaluate all forms of risks associated with different types of businesses in SMEs sector. On the other hand, it has been established that SMEs do not possess all the competencies necessary to run businesses. They do not have collateral demanded by financial institutions and cannot prepare proper financial statement due to lack of skills.

### **5.13 Size of Enterprise**

The majority (56%) of these firms are micro enterprises with employees within the range of 5- 49 which corresponds to other studies conducted in Tanzania (Kuzilwa, 2003; Mbwambo, 2003). Also, these results found that most SMEs employ only a small number of employees because their businesses are still growing and they lack the financial resources to grow. Therefore, small and medium enterprises in the economy are extremely few and far between.

#### **5.14 Factors that Hampering the Competitiveness's of SMEs**

As it has been identified in the literature and the empirical research, there are a number of internal factors hampering the growth of SMEs in Tanzania (Fatoki and Odeyemi, 2010). Thus, this study has revealed that one of the most significant obstacles for SMEs to grow is attributed to lack of marketing. Many SMEs have low levels of marketing skills which affect their businesses in terms of how to penetrate their products to the market; in addition, the majority of respondents agree that deficiencies in marketing are severe issues hampering firm growth and competitiveness.

Furthermore, most SMEs focus on price competition due to lack of knowledge and competition pressure of products from countries such as China and India. The interviewed respondents state that they concentrate on quality instead of price, though the manufacturing companies are worried about competitors having lower prices which might indicate that they also compete in price. Hence, the authors have observed that there is a correlation between these problems and poor management competencies since most entrepreneurs tend to start up a business before they have attained essential entrepreneurship knowledge required to run businesses.

An empirical investigation confirmed that a barrier to trade is another challenge facing them. The majority of respondents have agreed that SMEs face many challenges regarding trade regulations and registration. According to some studies conducted recently in the city of Dar es Salaam, most entrepreneurs in the small business sector get losses because of unrests between them and urban authorities

(Mbwambo and Arbogast, 2003). The research revealed that it is time consuming and costly for them to comply with all regulations and standards that are required in order to trade. Another subject discussed in the literature review is the issue that SMEs are very vulnerable to economic crisis due to their small size and their limitation of resources. The research has revealed that this is also the cause for the slow formation and poor competitiveness of SMEs within the region. Additional macroeconomic factors such as exchange currency rates and frequent power cuts have also been declared as obstacles to growth by the respondents.

Another factor highlighted by the research is that majority of SMEs have problems in selecting the right alternative in terms of new technology such as new machinery appropriate for their company which is due to poor access to information, limitations in finance and lack of management capabilities. Consequently, most firms acquire technology by copying from competitors resulting in low productivity or underutilization of machine and equipment. Also, SMEs often faced the problem of price inflation of raw materials and they cannot afford to purchase in bulk resulted in conveyance costs due to frequent travelling for buying a few raw materials.

### **5.15 Specialization of Incubator**

Most incubators specialise in one or a limited number of sectors. Hansen et al. (2000) already pointed out that specialisation is the best strategy. Ray et al. (2004) conclude from their research that having plenty of resources at one's disposal does not guarantee an increase in performance. It is rather by benchmarking the resource endowment and identifying, exploiting, developing and protecting critical

resources that a company can capture a competitive advantage over its competitors. The most popular sector in this study is the food processing enterprise (31 percent).

The researcher found that the incubator programme with a high degree of diversification faced the same challenges as other traditional concerns. It is true that tenants have to overcome the same start up challenges and can learn from each other, but next to that, there is hardly extra added value created in a diversified tenant portfolio. Also found that sharing technical resources among enterprises is only profitable if the incubator specialises in a specific field. Concentration on a specific sector increases the expertise of the incubator personnel and the value of the incubator to the entrepreneurs. The drawback, however, is the increased incubator vulnerability. If the sector in which the incubator focuses its activities suffers, the incubator programme will suffer as well.

#### **5.15.1 Selection Procedure**

The selection procedures should consist of issues regarding management team, market and financials (Aerts et al., 2007; Cordis, 2002). Patton et al. (2009) state that successful incubation starts with a quality pipeline. In this study researcher found different results, it revealed that the selection procedures were highly influenced by the issues to attract tenants to the incubator. Also, incubator manager mentioned that the programme failed to attract tenants that it likes to attract and that tenants are accepted for collecting office and premises rents. Another possible cause for the lack of a quality pipeline is the inability of the incubator programme to provide appropriate services to the tenant.

### **5.15.2 Services Offered by Business Incubators**

Business support is the most important aspect of an incubator's activities (Bergek and Norrman, 2008). However, in this study, it was noted that the most important activities of BIs were not related to the incubation process and delivering business support, but related to executing tenant businesses. Some tenants received business from this incubator programme, but this can be considered a latent effect. Moreover, it is doubtful whether these programs assist in preparing the tenants for the after graduation period.

The dominant reason to focus on executing businesses was to generate funds in order to sustain the incubator programme. This was necessary since a lack of sustainable funding had caused financial distress to the incubator. It was noted that financial distress in incubators results in less time spent for tenant coaching. Improving the resource bases through the incubator's business support activities does not only develop the tenant's resource base but does also improve the resource base of the incubator. The competencies of the incubator were analysed to be predominantly on financing options and the persuasiveness to make tenants employ workers.

However, the research did not find other competencies that influenced the tenants, despite that there is potential. For example, the highest need expressed by the tenants was sales. The incubator already gets some business for some tenants, but this might as well be a latent effect from its activities. Explicitly developing a resource base where tenants could benefit from in the area of market entry would build the expertise of the incubator as well as the tenants.

Especially at the start, the incubator should spend most of the time with the tenant since this will enhance trust and is the period where the tenant requires most of the advice. Moreover, the literature describes the preference for assistance based on perceived tenant needs (Patton *et al.*, 2009; Ratinho and Henriques, 2010) where Patton *et al.* (2009) state that the incubator identifies those needs through investing much time at the beginning. The researcher found that the incubator gives free consultancy when the tenants ask for advice, but there is no structural needs assessment in the place during the study.

However, the incubator convinced a number of tenants that they could not do everything by themselves and persuaded them to hire a trainee. This had let some tenants see the advantages of hiring employees for their business. This approach can be considered an indirect way where the incubator uses its expertise to identify the actual needs of a tenant. However, this approach is not structured and does not develop the tenant to build a resource base once it has to survive outside the incubator influence and is not available to all tenants and raises questions on building a tenant's resource base.

### **5.15.3 Tenant Network**

The existing literature point out that network enhancement as one of the main value adding components of an incubator (Bergek and Norrman, 2008), and it is included in the third principle of how to develop a theory of successful incubation (Tavoletti, 2013). Among others, networks are believed to ease the acquisition of resources and specialized expertise, to provide learning opportunities, and to allow new firms to build up legitimacy faster. The researcher found that some of the

tenants tried to establish a collaboration, of which one actually succeeded. However, there was also a case that did not succeed due to a lack of trust between the two tenants, although this collaboration looked promising.

Furthermore, there were also some tenants that absolutely did not want to collaborate since they were in the same business with business models closely related. These findings provide some support for the argument that tenants too closely related are not beneficial for tenant networking. However, the other relations seemed promising, since these were complementary, which is consistent with incubation literature (Schwartz and Hornych, 2010).

The interviewees agreed with the RBV and previous research in that network enhancement is one of the main value adding components of an incubator business (Coviello and Cox, 2006). One manager said that access to other people, and to networks, is one of the main benefits of being in an incubator as opposed to going out and starting a business yourself, somewhere else. The degree to which the incubator business is able to put a valid, relevant network in front of the right client is very important for them (MGR, 2014), and it is important for the incubator as well, because if the incubator succeeds in involving the start-ups in the local and international network, the probability for their startups to grow is higher (MGR, 2014).

#### **5.15.4 Graduation Period**

Graduation rates are seen as a good measure to appraise incubator outcome performance, since these are relatively politically safe (Hackett and Dilts, 2004;

Peters et al., 2004). They reflect the ability of incubators to help their tenants achieve economic stability and overcome the liability of newness so that they can compete independently in the external environment. According to Scaramuzzi (2002), business incubators should seriously specify the time limits, and the cost, type and value of services that would be given to applicants during the incubation process.

In Tanzania, SMEs are still faced with a high rate of failure in their first three years in operation (Choto, et al., 2014). Hence, business incubators provide a nurturing environment to increase SMEs' prospects for surviving in their first three years of operation (Al-Mubarak and Busler, 2010; Imbadu, 2013; SEDA, 2014). Thus, in both developed and developing countries, the public and private business incubation period generally last for three years (Masutha and Rogerson, 2014).

The researcher noted that there are no tenants managed to exit from incubator programme after graduation period, also the study note that most of the tenants are paying premises rent and other charges at a market price. Based on these findings, it appears that much of the success that incubators and policymakers claim is overstated. Despite these drawbacks observed, it still appears that incubators are not fulfilling their goal of preparing new ventures to survive and thrive outside the safety of the incubator.

#### **5.15.5 Problems Experienced**

In this study, the incubator managers complain about the lack of financial support from the Government as one of the challenges facing business incubator in their

effort to promote SMEs in Tanzania. Furthermore, lack of stakeholder support can be caused by an incubator's inability to provide satisfactory results to the stakeholders. Therefore, the empirical findings addressed the large capital requirements of the BI industry. From an RBV, this stresses the importance of the incubator to assist the clients in finding financial resources (Coviello and Cox, 2006; Lendner and Dowling, 2007).

Getting through the valley of death, i.e. getting from discovery to proof of clinical trials, without running out of money is a critical challenge for new business ventures. Access to funds is, therefore, a highly relevant performance indicator for business incubators and it is perceived to contribute to the robustness of the assessment framework with respect to business incubators.

#### **5.15.6 Business Plan**

Although the business incubation centres assist incubates in developing such plans, they are not reviewed quite often in the light of changes in the business environment. Once developed, they are not improved due to lack of timely, adequate and relevant data. Lack of industry support, shortage of staff and the paucity of time are some of the other major constraints. The study also showed that not all SMEs entrepreneurs prepared a business plan, and from the entrepreneurs that do write business plans only half of them update their plans regularly. Business plans do have a place in the business planning process; however, they are often written for financing purposes or for firms or enterprises rather than to help support the businesses.

### **5.15.7 Issues in Attracting Target Companies**

The researcher found out that the incubation programme is not self-sustainable due to lack of funds from the Government and stakeholders, which contradicts with findings of scholars such as Aerts et al. (2007), that 80% of European business incubators are self-sustainable. Also, most of SMEs are not attracted to join the incubation programme because of the small size of incubator premises of approximately a total area of 1100 square meters per tenant. This is inconsistent also with incubation literature that states that incubators should be at least 3,000 square meters (NBIA, 2002; Hackett and Dilts, 2004).

Most of the incubator premises do not allow more than 8 people working, which might be disadvantageous to be attractive to potential SMEs, and might be one of the reasons why incubators attract less qualitative tenants. On the other hand, some tenants had than one premises which enabling them to grow. Unfortunately, these growth opportunities immediately affect the number of companies in the incubator and might therefore as well block new business ideas.

### **5.16 Business Performance**

Overall, the independent t-test between incubated and non-incubated business shows that there was no statistically significant difference in a number of employees and capital investment in machinery in incubated and non-incubated business at  $p < 0.05$  as shown in Table 4.8 in Chapter Four. Also, the study revealed that there was no significant statistical difference between the amount of loan borrowed by individual owners between incubated and non-incubated business ( $t(133) = -0.008, p=0.994$ ) at  $p > 0.05$ . A comparison of employment figures

between both groups reveals similar trends. Incubated firms are larger, with a mean of 1.58 employees versus 1.57 employees for non-incubated business.

In terms of capital investment in machinery, incubated firms also outperform their counterparts although the independent sample T-test for equality of means in Table 4.7 indicated that the difference between is not statistically significant between the two group. Most of these issues are due to the facts that incubated business used shared offices and production room (common facility room) while non-incubated business not have that characteristic.

### **5.17 Target Market**

As depicted in Table 4.11 in Chapter Four most enterprises (incubated and non-incubated business) have their markets within their locality. This may pose a challenge given that they have to compete for the same market with enterprises from other nations and regions given the reality of trade liberalization and globalisation. It is important that businesses look beyond their local catchment area because globalisation presents both challenges and opportunities. As much as SMEs remain local, they need to consider markets beyond their national and regional boundaries.

The study findings indicated that on average the respondents were in agreement that market information has enabled businesses to cope with competition and enhance growth. Supplier links are provided adequately by the incubator where incubator management organised clients meeting with the incubatees in their state of the art boardroom increased the likelihood of closing a sale. Social networks are

a rich source of information that permits the individual different combinations to identify of the means ends deriving in the creation of new products or services for a particular market

### **5.18 Business Registration Status**

As indicated in Table 4.12 in Chapter Four, majority 46(74.2%) of incubated business were registered compared to 14(18.7%) of non-incubated business. This is due to the fact that business incubator helps tenants to acquire business licensing. The research also finds out that 54.74% of the total respondents (incubated and non-incubated business) had not acquired business licensing, therefore, the researcher noted that the literature supports these findings. As identified by Drodskie (2002), SMEs also lack title deeds to property, and only small businesses such as supermarkets run their businesses properly because most use title deeds for their business properties which enable them to know more about the license needed in running the business. Also, the researcher noted that there are little support mechanisms in the place from the Government that provides business owners (SMEs) with information about registration and licensing.

### **5.19 Financial Intermediary Role**

The findings from qualitative analysis shows that the major factors for the successful business incubator financial intermediation between incubatees and financiers are incubators credit guarantee, incubates high quality financial information and financiers trust to the incubator managers. These three factors were then subjected to the incubatees rating of the factors influence on their access to finance. The incubatees rated incubators credit guarantee the highest of the three

factors, followed by the financiers trust on the incubator managers and lastly incubates high quality financial information.

Based on the results, incubators credit guarantee is the strongest factor for that matter. This is mainly because, out of the three factors, incubators credit guarantee is the most effective way of reducing risk to the financiers. The most effective way credit guarantee is done by business incubator, incubatees and financier establishing special arrangement where a financier is required to provide the amount of loan to the incubatees, and the incubator guarantees the incubatees, in case incubatees fails to payback the credit, then the incubator will be responsible. The incubator is also required to come much closer to monitoring incubates loan management. In some cases an incubator can even be involved in tracing incubates revenue and expenditure so as to ensure that paying back the loan is the first priority expenditure.

Financiers trust on the incubator managers is founded on the fact that comparatively, incubatees show good trend of honouring repayment schedules and have well prepared financial statements. This is according to the interviewees responses about the reasons for incubates easy access to credit. Incubatees are relatively better candidates for financier's credit provision because they provide genuine information about themselves. All these happen due to the close monitoring by incubators on the incubatees. Therefore with this trend being witnessed for sometimes, financiers have created trust on the incubator manager's role of monitoring the incubatees. High quality of incubates financial information also is associated with the role of incubator managers. Provided with financial

trainings and consultancy, incubatees are in a better position to prepare good business plans, good financial record keeping. Incubatees are usually encouraged and emphasized by incubator experts to keep records.

### **5.20 Challenges Faced in Running the Incubator**

The interviews show that the majority of the SMEs are not aware of the existence of a business incubation program and what services they offer. Some of the interviewees raised questions concerning business incubators and business networks were also identified as major challenges which they face. In addition, those who attended incubation programs expressed the concern about business incubators not delivering what they promise incubates before they join their programs. In order to encourage attendance at their programs, business incubators should honour their word. This resonates with Azriel and Laricø (2008) views that business incubator managers should strive to collaborate with tenants, where tenants will view them as stewards with their best interests in mind which allows for successful outcomes for both parties.

### **5.21 Reason for Joining Incubation Program**

From the interview survey, one can conclude that SMEs attend business incubation programs owing to business failure; they attend an incubation program to obtain support to build their businesses. This should not be the case; SMEs should not wait to fail in their business in order to attend incubation programs. Incubation programs should be seen as a way to grow and expand their businesses. From the business incubator's point of view, SMEs do not express their problems and areas where they need assistance and act in isolation. The effectiveness of a business

incubation program can only be realised if the mentors know what their clients want through communication. Apart from this, the SMEs also lack commitment in their business venture, as well as in the incubation programs.

### **5.22 Human Skills and Competitiveness of SMEs**

The average frequency for the scores for the variable human skills indicated that business incubation services were very essential for one to start, operate and grow a competitiveness business. Increasing the studied measures of human skills offered by a unit would increase the level of competitiveness of the SMEs by 0.316 units. The study also shows that an incubatees characteristic mediates the relationship that the human skills services and SMEs competitiveness. Multiple regression analysis indicated that human skills jointly with other variables influence SMEs competitiveness.

### **5.23 Technical Skills and Competitiveness of SMEs**

Management competencies view technical skills as very important to lower level managers. Based on the findings on managerial skills learnt and their impact on business growth, the study concluded that the majority of the respondents learnt the business plan and human capital development skills. This is in congruence with the need to develop clear and concise business plans to facilitate not only funding, but also business efficiency.

### **5.25 Structural Capital and Competitiveness of SMEs**

The study established that lack of access to structural capital may be universally indicated as a key challenge to SMEs growth and enterprise owners receive

minimal help to tackle this challenge from their incubator premises. Business incubation tends to modestly link up enterprise owners to lenders thus have increasing their access to finance. Availability of financial support is a basic requirement to start an enterprise and individuals who perceive enterprise opportunities through accessibility to capital are more likely to make the decision to establish enterprises. Multiple regression analysis indicated that there is a positive linear relationship between structural capital services and competitiveness of SMEs in Tanzania. Financial capital theory view structural capital as an important predictor of new venture competitiveness and this could explain why incubatees took shorter period in the incubation than graduate to normal business environment.

This study found out that, business incubation moderates the relationship between incubator funding and performance of incubator centre. In embracing business incubation by incubator centres assist management comes up with innovative ways of financing incubator centre businesses. Incubator centres operate with limited resources, so there is need to increase the revenue streams to ensure these centres have adequate resources. Despite the fact that business incubation admits incubatees, the results of the study revealed that none of the incubators enjoy royalty fee.

Incubator management should be keen to identify firms that are willing to partner with incubator centres and collaborate in different activities aimed at improving competitiveness of the incubation centres. When the incubator centres embrace incubation program they will be the source of solutions to challenges and this will

be a way of marketing themselves and create awareness of their existence in the market, otherwise few people are aware of the existence of the incubation program. This will increase the number of incubatees. It will trigger entrepreneurial passion amongst the potential incubatees.

### **5.26 Effect of BIs in Promoting the Competitiveness of SMEs**

The influence of managerial skills on performance of competitive enterprises was determined through both descriptive and inferential statistics. The constructs under measurement were model that match program goals and uniqueness of ideas. The results showed that all the constructs had the means above average either with the affirmation that uniqueness of ideas was the highly agreed construct followed by standard selection tool and finally the model that match program goals construct.

All the measurements of this construct were found to load managerial skills with loadings above 0.4 thus all the four were retained. On testing the study hypothesis relating to this variable, it was determined that managerial skills has a significant positive influence on competitiveness of SMEs. This was deduced due to the estimated coefficient in the joint effect model in the hierarchical moderated multiple regressions that had a p-value less than 0.05. The null hypothesis was rejected.

The findings showed that, business incubation moderated the relationship between managerial skills and competitiveness of SMEs. This was tested fitting an overall hierarchical moderated multiple regression model considering joint effect of managerial skills. The rejection criteria were the significance of the change in R-

square due to addition of the interaction variables between managerial skills and business incubation. A significant R-square change was found and thus the null hypothesis rejected.

### **5.27 Contributions of the Study**

The study makes a number of contributions with respect to matters of both theoretical and practical concern. The contribution with regard to the theory will be presented first, followed by the contribution with regard to practical.

#### **5.27.1 Theoretical Contributions**

This thesis has several theoretical contributions. First, the literature provided various incubation models that described a typical incubation process but included limited research on how incubation outcomes occur particularly in developing countries. The present research study makes a positive contribution to fill that gap and contributes to the development of theory in powerful ways. In particular, this study presents a composite model (Figure 4.21- revised conceptual model) of the business incubation process and the impacts on business incubation in promoting the competitiveness of SMEs which is valuable to researchers, policymakers, and practitioners. The conceptualisation of the research design was guided from a previously developed framework by Hackett and Dilts (2004, 2008).

Secondly, measuring the impact of business incubation in promoting competitiveness of SMEs has long been one of the greatest challenges of research on performance of incubatees (Chappell and Sherman, 2008). The data analysis performed for this research shows that the impact of business incubation on SMEs

can be measured using a resource based view of the enterprise, social network and human capital theory. The resource based view postulates that enterprises gain competitive advantages when they acquire and retain resources that are valuable, rare, inimitable and non-substitutable (Barney, 2001). Business incubations support SMEs from inception and accelerate their learning curve and resource development, thereby contributing to competitiveness of the enterprise. Accordingly, SMEs in business incubation would profit from the program goals of helping companies to survive their hardest years and assisting them in overcoming the disadvantages of their inexperience.

Thirdly, the research findings demonstrate that SMEs inside business incubation report better business development from social network to a greater extent than those outside incubation program. This in turn indicates that SMEs inside business incubation will establish better resources and be provided with increased capabilities to enable them to develop competitive businesses compared with those outside an incubator. Thus, both social network and human capital may be characterized as important for the development of competitive SMEs. In other words, the findings demonstrate the importance of social network and human capital, showing them to be essential resources for SMEs competitiveness, as they both appear to boost enterprise performance.

Additionally, it is important to link enterprises to the most appropriate social networks available through business incubation. According to Totterman and Sten (2005) stated that for incubators, offering space and equipment is not the most important way to support tenants. Although these are important aspects of what an

incubator should offer tenants, the focus should be primarily on the development of business networks. These findings are consistent with the findings in this study, namely that networks are an important resource for SMEs. Additionally, network value seems also to be important for building competitive SMEs.

### **5.27.2 Practical Contributions**

The findings of this thesis present a number of practical contributions. First, these findings may also help Governments, educators and trainers identify and teach the issues that are required to make an enterprise competitive. For example, in this study researcher found that workshops attended by entrepreneurs have a significant influence on the growth competitiveness of their enterprises. Thus, the Government and other support institutions should consider establishing training programmes for the current and prospective entrepreneurs in Tanzania. For instance, the Government, through the vocational education training authority (VETA) and the small industry development organisation (SIDO), should encourage the development of tailor made training to the current and prospective entrepreneurs.

The training should be offered at reasonable rates in order to enable more participants to attend the training programmes. Based on our findings, training must focus not only on technical issues but also on entrepreneurial characteristics. In doing so, well trained entrepreneurs can create much needed employment and generate income which would help boost the Tanzanian economy. Furthermore, the findings in this study also underline the importance of the role of education and previous experience for the growth of SMEs.

According to Brush et al. (2001) maintained that, workshops or training enhance the knowledge, skills and management abilities of entrepreneurs and workshops or training may also change an entrepreneurs mind set and attitudes toward entrepreneurship. Accordingly, it is suggested that entrepreneurial technical skills can be acquired or enhanced in different ways, one of which is training and education (Poon et al., 2006). Therefore, appropriate training would enable entrepreneurs to change their behaviour and the manner in which they perceive their enterprise activities. Similarly, from the perspectives of pattern recognition, Baron (2007) argues that appropriate training enables entrepreneurs to become experts at recognising opportunities.

From this suggestion, it is obvious that to some extent these features can be taught. Therefore, programmes designed to train entrepreneurs in Tanzania should also focus on entrepreneurial technical skills. As we have seen, such characteristics have a substantial role to play in the competitiveness of SMEs. Specifically, the entrepreneurial technical skills which require more attention are: need for achievement, self of control, self-efficacy, entrepreneurial alertness, attitude towards entrepreneurship, creative style and entrepreneurial motivation. The right type of training will enable entrepreneurs to increase their business knowledge and abilities and thus increase the success of the enterprises.

**CHAPTER SIX**  
**CONCLUSIONS, RECOMMENDATIONS, LIMITATIONS AND AREAS**  
**FOR FURTHER RESEARCH**

**6.1 Introduction**

The foregoing chapter focused on presentation of discussion and contributions of findings of the study with reference to the objectives of the study. Data was interpreted and the results of the findings were correlated with both empirical and theoretical literature available. This chapter presents the major conclusions derived from the study as well as the recommendations, limitations of the study and the suggested areas for further research.

**6.2 Conclusions**

With respect to data obtained on sources of finances for SME owners and the role of business incubator in facilitating access to finance for SME owners, the study concluded that personal savings and family support is still the main source of start-up capital for SMEs. Business incubation programs have enabled program graduates access minimal business expansion capital, through recommendations to micro finance institutions (MFI) among other sources of capital. Correlation analysis reveals that indeed there exists no relationship between the sources of finance each graduate had access to and the extent of business growth. In this regard, graduates with access to finances from own sources reported increased business growth than counterparts with limited finances access.

The findings of the study indicated that incubator resources are very important to influencing performance and therefore very necessary to be taken into

consideration by management during decision making. The study was cognizance of the resource based approach that support enterprise resources being fundamental determinants of competitive advantage and superior performance. It advocates that enterprises differentiate their resources to compete favourably and increase the rents generated from these resources and be assured of continued existence in the market.

The findings of this study confirm positive relationships between human skills, technical skills and structural capital (independent variables) were found to be statistically significant in explaining the competitiveness (dependent variable) of SMEs enterprises in Tanzania, moderated by business incubator as shown in Figure 4.21. It is therefore possible to conclude that business incubation follow a more systematic approach in their managerial skills in order to incubate the most innovative ideas, and then provide them with business development services to ensure a formation of competitive SMEs.

The study draws a conclusion that business incubation significantly moderates relationship between managerial skills and SMEs competitiveness. This resulted in an increase of market share, capital investment in machine and equipment, number of employees and profitability. Through business incubator, these managerial skills will be encouraged to pursue creative destructive approach and innovative products and services for superior performance. SMEs that participate in an incubator program will be able to develop competitive enterprises in a more purposeful way than those who do not participate in such a program. Ultimately, this will lead to higher entrepreneurial performance for enterprises that participate in an incubation

program.

The core finding of this research study was business incubation practices positively impact to the competitiveness of SMEs in Tanzania. This study contributes to the field of strategic entrepreneurship. It enables firms to simultaneously engage in the search for opportunities and pursue competitive advantages. Strategic entrepreneurship requires that, enterprises to be innovative if they will have to compete effectively in the market.

### **6.3 Recommendations**

The recommendations for the study are based on the findings of this research. The researcher proposes the following recommendation for; business incubators, Government, banks, universities and business schools.

#### **6.3.1 Business Incubators**

Based on the finding that the majority of the SMEs who did not attend incubation programs are not aware of the existence of incubation programs, the researcher recommends that the business incubators should embark on program and marketing campaigns, with the aim of creating awareness of business incubations. In this way, the impact of incubation programs can be observed. Business incubations can also put emphasis on the incubator manager's links to key people in civil society organizations, institutions, private sector, Government agencies, and public representatives as another aspect to be utilized for promotion of incubated SMEs financing. This strategy brings the incubatees much closer to many semi-formal financiers which without incubator managers they could have not accessed them.

Business incubators should expand their services to incubatees to include special credit guarantee schemes so as to strengthen their financial intermediation role by eliminating the obstacle of lack of collateral, a problem that has been singled out by SMEs as the most burning obstacle towards financial accessibility.

Business incubator managers should strengthen their entry and exit policy by defining a clear incubation period and therefore the specific graduation period at the incubation centres. This is because this study has indicated that the length of the incubation period has no significant influence on incubates access to informal and semi-formal finance. Likewise, the incubation managers should encourage the sole proprietor incubatees to turn their businesses into limited companies so as to increase their accessibility to finance. This is because the study has found that business legal form has a significant influence on the financial accessibility.

### **6.3.2 Policymakers**

Policies define institutional environment of a country and therefore create institutional support framework for SMEs. Changing the whole institutional context in a short term is not easy, but policy makers in SMEs sector are in position to implement changes and create a more appealing SMEs ecosystem more rapidly. They should be involved in business incubation by sponsoring business incubation centre and facilitating participation of other organisations in the incubation programmes. Below are the recommendations to them on how they can promote business incubation in Tanzania.

They should analyse the existing state of institutional supports for business incubation to understand what the major critical obstacles for business incubation

activities are in the current setup and act accordingly. Some of program managers argued that limited financial resources is the major barrier to achieving their goals. Their sources of finance are not sustainable and sometimes not reliable. If financial resources are the main obstacle, policy makers should support business incubators either by directly providing financial assistance to the existing and/or aspiring business incubations or by facilitating the program access to sponsors.

Business incubator in Tanzania lack serious attention from the Government. Although incubation programs have been mentioned in the SMEs policy as one of the strategies to promote SMEs in the country, it is only a minute section of the policy and no special attention has been put to utilize incubation programs for SMEs promotion. Incubation programs are only considered as activities to be implemented by some Government parastatals, as a result parastatals like SIDO, TEMDO and COSTECH have many activities to do other than incubation programs. This compromises their commitment to incubation programs. Therefore Government should establish a special agency for business incubation which will be responsible to the promotion of SMEs in various sectors such as agriculture, manufacturing, mining, trading and even tourism.

The Government should embark on improving microfinance sector especially by multiplying the number of microfinance NGOs. There are still some areas where microfinance from NGOs is very limited and therefore forcing incubatees to rely on informal finance particularly VICOBA, ROSCAs and private moneylenders. The Governments should put much attention and efforts in supporting business incubation to enable them to incubate more SMEs and hence develop and improve

their financial management capabilities to facilitate financial accessibility. This study has revealed that business incubation significantly improve financial management capabilities of the incubated enterprises. Similarly it has been found that financial management capabilities of enterprise have a significant positive influence of SMEs access to semi-formal finance. It is therefore imperative for the Government to improve the ability of the program to incubate larger number of enterprises.

### **6.3.3 Banks**

Having identified a lack of funding as the major problems faced by SMEs, the bank should play a role in reducing this problem. They should have special funds in place at lower interest rates in order to assist entrepreneurs to establish and operating their business ventures.

### **6.3.4 Universities and Business Schools**

Due to a lack of entrepreneurial skills and knowledge, small business failure remains a problem in Tanzania. Therefore, universities and business school should introduce entrepreneurship as a field of study, in order to equip future entrepreneurs at an early age. Workshops and community involvement activities should also be embarked upon to encourage the development of entrepreneurship.

## **6.4 Limitations of the Research**

The issue of non-response cropped up due to either busy schedule of business owners while some avoided the qualitative sections of the questionnaire. Other business owners seemed to fear giving out information that may show the

inadequacy of the enterprise. However, the researcher utilized an interviewer administered questionnaire and tried as much as possible to fit in the respondent's timings. On completing the questionnaire, the researcher picked shortly after and made follow up calls to clarify queries as well as prompt the respondents to fill the questionnaires.

Missing values mainly due to non-response of some parts of the collected data were handled using the multiple imputation techniques. This technique was used to analyse the patterns of the missing values for the variables and generate possible values for the missing ones. This was chosen because the data collected for the variables were categorical of the ordinal scale. Analysis of the missing values patterns was carried out as weight analysis and determined the possible distribution of the missing values for the variables. In addition, the study assured respondents of adherence to the ethical issues in research like confidentiality where data was used for only research purpose. Secondly, the study obtained informed consent from incubator managers and respondents before data collection and was ready to take responsibility for any research eventualities.

### **6.5 Scope for Further Research**

This study on business incubators is not the first and definitely not the last one. The young age of incubators is one of the main limitations of the present research study and does not allow testing the progress over longer periods or larger amount of incubator tenants. Further research can also take a comparative approach to SMEs growth on enterprises under incubation and survivability of businesses which graduated from the incubator.

The present research study did not include an assessment of the impact of specific services provided by business incubation upon the evolution of competitive SMEs. To better understand the different effects of business incubations, studies with the incubator as the unit of analysis may show which types of services have more influence on SMEs. This type of design would change the focus from the entrepreneur to business incubations staff team and how they manage the potentials and dynamics of social capital.

The study has not investigated whether business incubation supported by the public sector enhances the competitiveness of the incubated enterprises. It will then be necessary to do a follow-up study in which the long-term performance of incubated enterprises (after their graduation) is contrasted with the results of the long-term performance of a control group of comparable non-incubated enterprises.

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## APPENDICES

## Appendix I: Cover Letter

## THE OPEN UNIVERSITY OF TANZANIA

## DIRECTORATE OF RESEARCH, PUBLICATIONS, AND POSTGRADUATE STUDIES

P.O. Box 23409 Fax: 255-22-2668759  
Dar es Salaam, Tanzania,  
<http://www.out.ac.tz>



Tel: 255-22-2666752/2668445  
ext.2101  
Fax: 255-22-2668759,  
E-mail: [drpc@out.ac.tz](mailto:drpc@out.ac.tz)  
26/06/2012

## TO WHOM IT MAY CONCERN

## RE: RESEARCH CLEARANCE

The Open University of Tanzania was established by an act of Parliament no. 17 of 1992. The act became operational on the 1<sup>st</sup> March 1993 by public notes No. 55 in the official Gazette. Act number 7 of 1992 has now been replaced by the Open University of Tanzania charter which is in line the university act of 2005. The charter became operational on 1<sup>st</sup> January 2007. One of the mission objectives of the university is to generate and apply knowledge through research. For this reason the staffs and students undertake research activities from time to time.

To facilitate the research function, the vice chancellor of the Open University of Tanzania was empowered to issue research clearance to both staffs and students of the university on behalf of the government of Tanzania and the Tanzania Commission of Science and Technology.

The purpose of this letter is to introduce to you **Mr Sigisbert Mathias Mmasi** is a PhD student at the Open University of Tanzania with Reg. No. HD/B/853/T.11. By this letter Mr Sigisbert Mathias Mmasi has been granted clearance to conduct research in the country. The title of his research is "An Investigation of the impact of business incubation in promoting competitiveness of SME's: A Case Business Incubator in Tanzania. The research will be conducted in Arusha, Morogoro and Dar es Salaam. The period which this permission has been granted is from 01/07/2012 to 30/10/2012.

In case you need any further information, please contact:

The Deputy Vice Chancellor (Academic)  
The Open University of Tanzania  
P.O. Box 23409  
Dar es Salaam

We thank you in advance for your cooperation and facilitation of this research activity.

Yours sincerely,

Prof Shaban Mbogo

For: VICE CHANCELLOR

THE OPEN UNIVERSITY OF TANZANIA

## Appendix II: Research Questionnaire

The purpose of this questionnaire is to collect data that will enable the researcher to investigate the impact of business incubation in promoting the competitiveness of SMEs in Tanzania. The research is purely for academic purposes. You have been selected to participate in survey because of your potential to give the required information. Rest assured that the information you will give will be treated as confidential and will be used for the purpose of this study only. Please kindly tick the statement/phrase that answers the question best.

### 1.0: DEMOGRAPHIC INFORMATION

1.1 Gender of the respondent: Male [  ] Female [  ]

1.2 What is your age group?

20 -29 [  ] 30 -39 [  ] 40-49 [  ] 50 and above [  ]

1.3 Please indicate the highest level of education you have successfully completed.

Never attended school [  ] Primary education [  ]

O level secondary school [  ] A level secondary school [  ]

Diploma [  ] University degree [  ] other specify\_\_\_\_\_

1.4 Have you attended any vocational training? Yes [  ] No [  ]

1.5 If yes, please indicate which category best describes the time you have received the training. This year [  ] 1 to 3 years ago [  ]

4 to 7 years ago [  ] more than 8 years ago [  ]

1.6 Please indicate the duration of training.

One year [  ] Two years [  ] Three years [  ] more than three years [  ]

1.7 Did you start your business in the same field as your previous employment?

Yes [ ] No [ ]

1.8 If yes how many years of experience

1-3 [ ] 4-7 [ ] 8-12 [ ] above 12 years

1.9 Was anybody in your family running an independent small firm before you? Yes [ ] No [ ]

1.10 If yes in respect of relatives kindly indicate which type of relationships.

Parent [ ] uncle [ ] Brothers [ ]

Grandparents [ ] Sisters [ ] Aunt [ ]

1.11 Please indicates which type of business he/she was/is running í í í .....

## 2.0: PROFILE OF THE FIRM

2.2 When was your firm established?

1 ó 5 [ ] 5 ó 10 [ ] 10 ó 15 [ ]

15 ó 20 [ ] 20 ó 25 [ ] over 30 year ago [ ]

2.3 Legal status of the company:

Proprietorship [ ] Partnership [ ] General Partnership [ ]

Limited company [ ] Cooperative [ ] other

2.4 How did you raise your capital when starting the business?

Incubator loan [ ] Own Accumulation [ ] Bank Credit [ ]

Friends / relatives [ ] other.....

2.5 Was your capital sufficient when starting business? Yes [ ] No [ ]

Briefly describe the nature/specialization of your enterprise

í í

At present do you own and manage any other firm beside this one?

Yes [ ] No [ ]

2.6 If yes how many businesses are you currently managing? í í í í í í í .

2.7 What is the total number the employees currently working within your

premises? Less than 5 [ ] Between 5 and 49 [ ]

Between 50 and 99 [ ] More than 100 [ ]

2.8 What is your capital investment in machinery in Tsh? Between 0-5 mil [ ]

Between 5-200mil [ ] Between 200-800 mil [ ] 800 mil and/or above [ ]

2.9 Which are the common problems encountered on the SMEs credit requests

í  
í í

### 3.0 BUSINESS INCUBATION

3.1 Did you start this business after set up in business incubator? Yes [ ] No [ ]

3.2 For how long does your enterprise operates at the centreí í í í í í í ..

3.3 How would you say the incubation process changed the way you view your

enterprise and entrepreneurship in generalí í í í í í í í í í í í í í í í

3.4 What is the graduation period in incubation program?

Three years [ ] Five years [ ] More than five years [ ]

3.5 What are services offered by business incubators

Machine and equipment [ ] Business loan [ ] Business training [ ]

Help in accessing finance [ ] Shared facilities [ ] Marketing assistance [ ]

Networking activities [ ]

3.6 Does your incubator really contribute to the Incubateesø financial

accessibility? Yes [ ] No [ ]





4.3 How would you describe your company assets development over the three years? Decline [ ] Remain the same [ ] Increase [ ]

4.4 What is the total cumulative amount of funds (in Tsh) your firm has obtained from incubator program within three years ago?.....í í í í í í í í

4.5 What is the total cumulative amount of funds (in Tsh) your firm has obtained from the bank within three years ago? .....

4.6 What are the company's target markets? Individual [ ] Small business [ ] Large business [ ] Government [ ]

4.7 Does your company have an existing business plan? Yes [ ] No [ ]

4.8 Does your company have business licensing? Yes [ ] No [ ]

4.9 Please make any other relevant comments  
í í

**5.0 GENERAL INFORMATION**

5.1 Which of the following stages best describes the firm's current stage of development? Start [ ] Growth [ ] Maturity [ ] Decline [ ] I don't know [ ]

5.2 Apart from the business, what is your other source of income?  
í í

5.3 Have you received any business support from the Government institutions (Trainings, Technology, Managerial skills and Capital access etc.) since you started your business? Yes [ ] No [ ]

5.4 If yes, when did you receive that business support? Last year [ ] 1 to 2 years ago [ ] 3 to six year ago [ ] more than seven years ago [ ]

5.5 Do you face challenges in operating your business? Yes [ ] No [ ]

5.6 If yes what kind of challenges? (Please you may tick more than one)

- a) Lack of marketing and managerial skills
- b) Lack of machine and equipment
- c) Lack of Government support
- d) Lack of access of loans
- e) Slow formation of technology business incubator

6.0 Any additional comments you wish to make:

í  
í  
í í

**THANK YOU FOR YOUR TIME AND EFFORT**