

**INFLUENCE OF INNOVATION ON SMALL AND MEDIUM
ENTERPRISE (SME) GROWTH
THE CASE OF WOOD AND STEEL FURNITURE
MANUFACTURING IN DODOMA CITY**

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THE CASE OF WOOD AND STEEL FURNITURE
MANUFACTURING IN DODOMA CITY**

**BY
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**A Dissertation Submitted in Partial Fulfillment of the Requirements
for Award of Degree of Masters of Science in Entrepreneurship
Development (MSC. ED) of**

Mzumbe University

2019

CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance, by the Mzumbe University, a dissertation entitled **Influence of Innovation on Small and Medium Enterprise (SME) Growth: The Case of Wood and Steel Furniture Manufacturing in Dodoma City**, in partial/fulfillment of the requirements for the degree of Masters of Science in Entrepreneurship Development of Mzumbe University.

Major Supervisor

Internal Examiner

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I, John, Stephen, declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other University or Institute for similar or any other Degree Award.

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ACKNOWLEDGMENT

The completion of this study has been made possible due to the tireless efforts done in the period of my study and at the Mzumbe University. This work has been fruitful due to financial support, consultations, and professional aid from a number of people and friends.

First, I thank God Almighty for protection and providing me with good health for all the period of my study. Moreover, rising people from different part of the country to pray for me and stand for me during my troubles. It was without Him, this success could not be reached. Thank you God, I exalt your name above all names.

Secondly, I am greatly indebted to my supervisor, Dr. Mushumbusi Paul Kato for his directives to and guidance on how to go through successful completion of this noble tusk throughout the study. Despite many challenges that I faced, he was there for me to help and assist to make sure I reach this stage with great success.

Thirdly, my heartfelt appreciation goes to Dr Hawa Tundui for her great heart to help regardless of the time and space I asked of her intervention in this work. She was there to give more directives in the analysis of the data set to bring about desired meaning. Thank you madam, you acted like a mother to his child.

Fourthly, I am thankful to my wife, and children who were tolerant for all the period of my absence. As father, they needed me more than anything but I was not there for them. Magreth Cletus Mhanga, Neema Dominic Kiswaga, my sons Amram Stephen Fuime and Shemaiah Stephen Fuime and my daughter, Naomi Stephen Fuime. Their tolerance and prayers has made me accomplish this study. Without them this work could not be done in the way it is done.

Lastly but not in importance are my fellow members of prayer group (retreat group) Anjelina Gutta, Dominic Msami, Neema Kiswaga, Mama Roida Mwonga, Mama Felix, for fasting and praying for me to get out of trials that were facing me during my studies, may God bless tem abundantly.

DEDICATION

This work is dedicated to my mother Richardis Mamboleo Danda, Sister, Neema Kiswaga, Uncle Anthony Simon Fuime and my wife Magreth Cletus Mhanga, my children Amram, Shemaya and Naomi Stephen Fuime.

ABBREVIATION AND ACRONYMS

GDP	=	Gross Domestic Product
ICT	=	Information and communication technology
MDF	=	Medium Density Fibreboards
MLRA	=	Multiple Linear Regression Analysis
PDM	=	Physical Distribution Management
R&D	=	Research and Development
SIDO	=	Small Industry Development Organization
SLRA	=	Simple Linear Regression Analysis
SME	=	Small and Medium Enterprise
TQM	=	Total Quality Management
URT	=	United Republic of Tanzania
VETA	=	Vocational Education Training Authority

ABSTRACT

The purpose of this study was to investigate the influence of innovation on the growth of small and medium size enterprises (SMEs) in Tanzania majoring the wood and steel furniture manufacturing subsector. We examined i) the influence of product innovation on SMEs growth, ii) the influence of process innovation on the growth of SMEs and lastly we investigated the influence of management of innovation on the growth of SMEs in Dodoma city.

The nature of the research design was quantitative; it involved the testing of hypotheses concerning influence of innovation on the small and mediums enterprises growth. Explicitly, we hypothesised that product innovation; process innovation and management innovation have an influence on the growth of SMEs in Tanzania. Data was collected from 91 wood and steel furniture manufacturing firms which were used as representative of SMEs in Dodoma City.

In this study, descriptive statistics, Analysis of Variances (ANOVA), factor analysis, simple and multiple regression analysis were employed to analyse the data. Findings revealed that innovation has a positive influence on the growth of SMEs. Product innovation confirmed to have however higher influence on the growth of SMEs than process and management innovation. Findings from demographic characteristics showed that entrepreneurs who about 51.6 % of all who owned carpentry workshops had only basic education or had only completed standard seven; this affected management innovation capabilities in the firm. It was also revealed that carpentry is owned by men and married as it majority composing of small enterprises basing on the factor of the number of people they employed for the period of study.

Due to these findings, there are policy implications such as policies that promote the use of recycled wood materials and protection of environment that was previous destroyed by the use of timber in making furniture. Moreover, the theories of innovation and RBV and their applicability in the context of Tanzania are addressed to improve SMEs sector and recommendation where there should be business incubator in which small business will be housed to groom their ideas in business.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Problem

The world is experiencing the fastest pace in the enterprise growth and business establishment in various entrepreneurial industries from social media and online advertisement enterprises to manufacturing (Cooney, 2012). Many of these enterprises have been influenced by creativity and innovation capturing the changing demand of the customers as well as an attempt to solve people's problems (Gabriel, 2017). Markets change too quickly and competitors move too fast for small company to stand still and expect to remain competitive (Rexhepi, 2014). Because of their organisational and managerial flexibility, small business often can detect and act on new opportunities faster than large companies can (Rosenbusch, Brinckmann, & Bausch, 2011). To be able to do that, innovation is inevitable for SMEs.

Developing countries capabilities to face global economic challenges depends largely on the stage of innovational development of their small and medium enterprises (SMEs)¹.

Throughout the world, innovation is viewed as a centre of enterprises to growth and that innovation had impacted "small number of younger firms with high growth" which were accountable to new job creation, technology progress, and economic growth (Ionica, 2013) in the world as cited in Schumpeter (1934) and in Birch (1987). The contribution of SMEs to the economy of any country globally is very high due to greater production of goods in the country (Maradana et al., 2017). This contribution is made possible due to increase in the innovational capabilities carried by SMEs in the product development rendering quality goods and services (Martin & Namusonge, 2014). In the world, for businesses to grow at pace desired, innovations need to be commercialised in the production of quality goods and services for the market (McDaniel, 2005).

Similarly, SMEs competitiveness and hence growth in Tanzania and the rest of developing countries features a number of impediments in their road to success in

¹ https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1021214 cited on 27/9/2018

both domestic and foreign markets². For the growth of any business, innovation has been addressed worldwide as one of pillars and that it has even changed the way business is being conducted and how customer orientation is seen as core for competitiveness (Martin & Namusonge, 2014). It is estimated that, 50% of all industrial produce in Tanzania come from SMEs as cited in (United Republic of Tanzania, 2001). This means that SMEs are important to the growth of Tanzania's economy. If Tanzania SMEs could speed up its innovation capabilities and stabilize internal market, this could ensure their growth.

In Dodoma city, there were a number of wood and steel furniture manufacturing sub-sectors flourishing at the city center. Innovative ideas could easily be obtained during Sabasaba International Trade Fair exhibitions, Nanenane farmers' day in Dodoma where many medium and large enterprises advertise their product, functionalities and efficiencies in their use. Many improved manufacturing tools were sold to small firms and enterprises during this period that could influence the firm to embark into innovativeness and hence grow. New fashions of furniture are also put in a show in this period to the small business enterprises to copy the innovation.

Since the inauguration of Dodoma city as the capital city of Tanzania, there was a mushrooming of population, civil servants shifted in the city. This increasing population meant increase in market for improved wood and steel furniture within the city. However, the rate at which wood and steel manufacturing SMEs adopt innovative strategies to capture the market and use it as an opportunity to grow is small. Housing industry is flourishing, something that could become an indicator that these houses would need modern furniture to fit in, and offices are increasingly built as the ministries are shifting to the capital and would need fixture and fitting.

Due to the rapid growth of Dodoma city, it was obvious that the demand for wood and steel furniture had also increased in the households. This could be assisted by the growing innovative SMEs that were continuously improving its produce. Nevertheless, there is little or no literature is known about the link between innovation in the wood and steel furniture sub sector and growth of small and medium enterprises (SME) or any innovation model focused on SMEs growth.

² https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1021214 cited on 27/9/2018

1.2 Problem Statement

Innovation is indispensable for sustainable SMEs growth and economic development. In the contemporary economy, innovation is key for value creation, growth and employment and that innovation processes take place at the enterprise, regional and national level (Gerguri & Ramadani, 2010). Innovation for growth is seen to be the hub for enterprises wishing to develop and grow. The study conducted in Kenya on the influence of innovativeness on SMEs growth showed that innovation had an influence on SMEs growth (Martin & Namusonge, 2014; Ngugi, McCorege, & Muiro, 2013). Oncioiu, Bîlcan, and Petrescu, (2017) as cited in Oman (2008), iterate that the newness that innovation describes in the improvement of products and services.

Despite this recognition of the fact innovation play an important role in any nation, which have an input in SMES growth, employment creation and indirectly reduction of poverty (Rexhepi, 2014) as cited in (Ayyagari *et al.*, 2007), SMEs have positive impact economic growth due to innovativeness (Muritala Taiwo, Awolaja Ayodeji, & Bako Yusuf, 2012), existence empirical evidence of the relationship between innovative behaviour of SMEs and firm performance and its subsequent growth of a firm (Mahemba & Bruijn, 2003), the link between innovation and SMEs growth is not well coined and therefore not well known.

Many studies have been conducted to study the impact of innovation on SMEs performance (Ionica, 2013; Love & Roper, 2013; Ngugi et al., 2013) and relationship between innovation and economic growth (Maradana et al., 2017), effects of innovation on SME (Bož iæ & Radas, 2005), the influence of innovation on SMEs in Kenya (Ngugi et al., 2013); to the best of researcher's knowledge, no studies have been conducted to link innovation and SMEs growth, especially in the area of wood and steel furniture manufacturing sub sector in Tanzania. At least in the knowledge of the researcher, the study related to whether "innovation has an influence on the growth of SMEs" is not done, and the extent to which innovation has influenced the growth of SMEs is not clear and the literature about how innovation has an influence on SMEs growth is not well documented in Tanzania. This study therefore unveils the influence of innovation on the growth of SMEs in Tanzania, by assessing how

innovation influences SME growth in wood and steel furniture manufacturing sub-sector and provides a literature for the relationship thereof.

1.3 Research Objectives

1.3.1 General Objectives

The overall objective of this study was to assess the influence of innovation on the growth of SMEs in Tanzania

1.3.2 Specific Objectives

- i) To examine the influence of product innovation on the growth of wood and steel furniture manufacturing SMEs in Dodoma City.
- ii) To determine the influence of process innovation on the growth of wood and steel furniture manufacturing SMEs in Dodoma City.
- iii) To investigate the influence of management innovation on the growth of wood and steel furniture manufacturing SMEs in Dodoma city

1.4 Research Question

- 1) To what extent does product innovation influence the growth of wood and steel manufacturing SMEs?
- 2) To what extent does process innovation influence the growth of wood and steel manufacturing SMEs?
- 3) To what extent does management innovation influence the growth of wood and steel manufacturing SMEs?

1.5 Scope of the Study

The study on the influence of innovation on Small and Medium Enterprises (SMEs) was conducted in Dodoma City. Covering the wards of the Dodoma city where innovation practices are prevailing in the wood and steel manufacturing in the furniture industry. There are many factors that influence growth of SMEs, such as sales revenues, assets turn over, capital, size of premises, standard of service, number of customers, profile of the business, employment, but for the sake of this study, it

was concerned only with assets, employment and capital growth. The scope of this study is limited to registered or formalized wood and steel furniture SMEs only.

1.6 Significance of the Study

The study is expected to inform policy makers on establishing policies that would encourage firm innovativeness, and its impact on the growth of small business and small industry in the country and cumulatively add to contribute to the GDP of the country through increase in the products produced with the country.

Add to the literature, the link between innovation and SMEs growth as references for further researches in the related field. In view of the fact that SMEs dominate the private sector (formal and informal) in Less Developed Countries (LDC) like Tanzania, a deeper understanding of the link between innovation and SMEs is highly needed.

1.7 Limitation of the Study

The study was conducted in the city center where during the period of data collection, there were so many political and economic activities carried out. Due to this scenario, my study was to some people perceived having political motives or affiliations, or a government agency which lead to some of the respondent become reluctant in providing true, relevant and accurate information to the researcher. This perception came into their mind because few months before there were people from the government with cameras doing the likely exercise and they expected some positive return from them but in vain. To solve this problem, the researcher during introduction had to show his student ID card as a proof and explain the importance of the research activity he was in to the completion of his studies. Some respondent provided wrong information as they associated this exercise with the possibility that it may be used by TRA to estimate tax base they had to pay. This was due to the reason that while the research was in the process of collecting data, TRA officials were in the exercise of closing some of the firms and business in the city. To solve this problem, during data cleaning and editing, these questionnaires were marked and discarded. The sample of the study was seen representative of the population. However, data was collected only from one subsector of manufacturing industry.

More studies are needed to prove this relationship to other types of manufacturing firms to be able to make generalisation of these findings.

1.8 Organization of the Study.

This dissertation has six chapters. Whereby chapter 1 introduces the study in the background of the study, statement of the problem, research objectives significance of the study and limitation of the study. Chapter 2 is the review of the literature where we review theories governing the study, theoretical and empirical review to literature and other concept related to the study are explained.

Chapter 3 is the methodology of the research, where important concepts, research designs and sample and sampling techniques are explained. Chapter 4 deals with the presentation of the findings. Research results are presented with few elaborations. Chapter 5 presents a detailed discussion of the results presented in the chapter 4 and chapter 6 presents conclusion and recommendations. It provides in nutshell the summary of the observed findings and provides recommendation for future researchers and policy making purposes.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

2.1 Theoretical Review

According to Kerlinger (1979), a theory is “a set of interrelated constructs (variables), definitions, and propositions that presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining natural phenomena” (Lunenburg, 2011). The influence of innovation on SME productivity growth was brought to attention by Goldman Sachs, the Enterprise Research Centre (ERC) and the British Business Bank (BBB) in their co published report going by the heading the *Unlocking UK Productivity Report*³. In this report, it was noted that, innovation boosted productivity and facilitated significant growth in sales. Moreover, the report revealed that survival rates were higher for SMEs that adopted innovation than for those that did not innovate with respect to the market demand⁴. According to this report, change implementation that is brought about by innovation; suggest that SMEs survival and growth is highly determined by how a business is innovative.

2.1.1 Creativity

Creativity leads to the conceptualization of a new idea or creation of new invention, but innovation facilitates the commercialization of new concept or invention. This can be made possible if the entrepreneur breaks the traditional business practices, takes initiative, mobilizes resources and translates the new finding into useful good or service through innovation (Nandan, 2007). It refers to the intellectual power to create something new, which symbolizes the quality of imaginative skills to create something original rather than imitation of something already existing (Nandan, 2007)

³ www.telegraph.co.uk/connect/small-business/driving-growth/supporting-small-business-growth/innovation-key-to-sme-growth/ on 14 08 2018

⁴ www.telegraph.co.uk/connect/small-business/driving-growth/supporting-small-business-growth/innovation-key-to-sme-growth/ on 14 08 2018

2.1.2 Innovation

The term innovation refers to the creative change and this change maybe in the form of new product, service, newfound material, new market opportunity or newly reorganized business enterprise (Nandan, 2007). Innovation takes the entrepreneurs creative idea, implements it by innovating and producing a product in the light of the customer, and provides it value as it become useful in the manufacturing process and in the market. Innovation is also referred to as the process of taking a creative idea of an entrepreneur and turning it into a product or process that can be used or sold or is the process of taking a creative idea and turning it into a useful(marketable) product , service or method of production (Coulter, 2006)

It involves applying focused strategies to new ideas and new insights to create a product or a service that satisfies customers' needs or solves their problems (Zimmerer, Thomas and Scarborough, 1996). Innovation, in its broadest sense, is the ability to introduce new products and services or improve business processes or strategies⁵.It is also defined as the process of commercializing product from an invention (Ngugi et al., 2013). Innovation is a process of industrial transformation, that constantly revolutionizes the economic structure from within, constantly destroying the old business product, creating a new one (Śledzik, 2013).

It is referred to as a situation where a business organisation uses not only her own internal knowledge, sources and resources (intrapreneurs and R&D) for innovation of products, services, business models and processes but also uses multiple external sources such as customer feedback, published patents, competitors, external agencies, international business exhibition to drive innovation⁶.

It is the concept that assert that there are valuable ideas that emerge from inside or out of the company and can be marketed from inside or outside the business organization (Sungjoo Lee, Gwangman Park, Byungun Yoon, & Jinwoo Park, 2010). Innovation is divided into two types namely, inbound innovation, and Outbound innovation. It is out of scope of this study to define inbound and outbound

⁵ <https://www.telegraph.co.uk/connect/small-business/driving-growth/supporting-small-business-growth/innovation-key-to-sme-growth/> cited on 14 08 2018

⁶ <https://www.oxford-review.com/oxford-review-encyclopaedia-terms/encyclopaedia-open-innovation-definition-explanation/> cited on 10/9/2018

innovation. It is an intentional use inflows and outflows of knowledge to speed up internal innovation, and develop the markets for external use of innovation, in that order to advance in technology (Tucci, Chesbrough, Piller, & West, 2016).

2.1.2.1 Product Innovation

According to Phillip Kotler, a product is anything that can be offered to a market for attention, acquisition, use or consumption that might satisfy a want or need. Such product may be physical objects, services, persons, places, organizations and ideas (Kotler, 2012). It is referred to as the establishment of totally new product from new materials or the modification of present products to meet customer satisfaction (Rosli & Sidek, 2013). Schumpeter (1934) argued that product innovation is the introduction of a new good or quality thereof in the market; a product that consumers have not been in contact previously (Martin & Namusonge, 2014). Product innovation is the introduction of new use, packaging, added function and improved performance. Wood and steel manufacturing SMEs are thereby seeking capital growth in machinery investment (Mashimba & Kühl, 2014) that is influenced by innovation accessibility for the new or modified products and services introduced in the market. Product innovation plays an import role in making sure that customers' needs are reached for the particular product. This may be done through different product design, packing, quality of the product improvement and quantity.

2.1.2.2 Process Innovation

Process innovation is referred to as the implementation of a new or significantly improved production or delivery method including significant changes in techniques, equipment or software⁷. Process innovation is the use or introduction of a new technology or technique for doing something that helps an organization remain competitive and meet customer demands⁸.

It is the concept that refers to the implementation of a new or improved, or fabricated production or delivery method (including significant changes in techniques,

⁷ <http://www.innoviscop.com/en/definitions/process-innovation> cited on 1/10/2018

⁸ <https://searchcio.techtarget.com/definition/process-innovation> cited on 1/10/2018

equipment and/or software)⁹. It is “an amalgamation of skill, technologies, and facilities required to produce, deliver, and support a service or product¹⁰”. Effective in-house manufacturing provides the best opportunity to harmonize product design specifications with process capabilities, as well as retain and protect intellectual property¹¹. Product innovation can hardly be realised without the method through which product manufacturing process is unaltered or unimproved. Consequently, in the process of improving the product to add on the value of the company, manufacturing process innovations are inevitable. Process is the combination of facilities, skills, and technologies used to produce, deliver, and support a product or provide a service¹².

2.1.2.3 Management Innovation

Management innovation is defined as “the invention and implementation of a management practice, process, structure, or technique that is new to the state of the art and is intended to further organizational goals” (Birkinshaw, Hamel, & Mol, 2008). Management innovation is also referred to as a “difference in the form, quality, or state over time of the management activities in an business organization, where the change is a new or unique departure from the past (Birkinshaw et al., 2008). Management innovation transforms the way managers do their business activities, what they do, and they do so to improve organizational performance¹³. Management innovation is also defined as a distinct departure from long-established management principles, processes, and practices that change the way management work is performed¹⁴.

According to Hamel (2006), management innovations meet the following criterion; a) they were very new at the time, b) a distinct departure from previous management practices, c) providing a competitive advantage on the pioneering company, and

⁹ <http://www.innoviscop.com/en/definitions/process-innovation> cited on 10/9/2018

¹⁰ ¹⁰ <https://www.hackerearth.com/blog/innovation-management/what-is-process-innovation/> cited on 10/9/2018

¹¹ <https://iveybusinessjournal.com/publication/process-innovation-the-crucial-facilitator-of-product-innovation/> cited on 10/9/2018

¹² <https://differential.com/insights/the3typesofinnovation/> cited on 10/9/2018

¹³ <https://hbr.org/2007/10/management-innovation-defined> Cited on 1/10/2018

¹⁴ <https://managingresearchlibrary.org/glossary/management-innovation> Cited on 1/10/2018

lastly d) are lasting, being found in some form in organizations today¹⁵. Innovation drives business growth and helps organizations stay ahead of their competitors¹⁶. Management innovation refers to product, business process, and organizational innovation¹⁷. Change in management innovation has allowed organisations to reach new performance foundation or beginning. One of the importances of management innovation in the business organization is the ability of the management to harness employee intellect, whereby employees in the organization may use their intellect to be problem solvers, innovators¹⁸, and change agents as long as they are given support from the management. The expected results of management innovation are, i) increased number of new ideas, ii) improved quality of ideas, iii) efficient implementation of quality ideas and lastly iv) improved resulting success achieved from the implementation of new ideas¹⁹. Fortune favours the prepared mind, whatever services your business firm or organisation provides to the market, recognizing the key problem patterns that characterize your customers' needs and arranging your resources accordingly can make a massive difference in your ability to respond to opportunities²⁰.

2.1.3 Small and Medium Enterprises (SME)

There is no common definition of SME since different countries defines SMEs depending on their level of development. In Tanzania, the SMEs development policy defines SME “as micro, small, and medium-size enterprises in non-farm activities, including manufacturing, mining, commerce and services”²¹ (Gabriel, 2017; URT, 2003). The standard measure is total number of employees, total investment and sales turnover. However, in Tanzania, micro enterprises employ up to 4 people usually family members with capital up to Tshs.5.0 million. Small enterprises are

¹⁵ <https://www.management-issues.com/interviews/3251/gary-hamel-management-innovation/cited> on

¹⁶ <https://searchcio.techtarget.com/definition/innovation-management> cited

¹⁷ https://en.wikipedia.org/wiki/Innovation_management cited on 1/10/2018

¹⁸ <https://hbr.org/2006/02/the-why-what-and-how-of-management-innovation> cited on 1/10/2018

¹⁹ <https://www.balancedscorecard.org/portals/0/pdf/HowToMeasureInnovation.pdf> cited on 1/10/2018

²⁰ https://www.bearingpoint.com/files/Innovation_High_Res.pdf Cited on 2/10/2018

²¹ <http://www.evancarmichael.com/African-Accounts/1666/3132-00The-SME-sector-in-Tanzania-Support-for-Growthoriented-Women-Entrepreneurs-in-Tanzania-2005.htm> cited in 29 09 2016

formalized businesses with 5 up to 49 employees or capital investment ranging from Tshs.5 million to Tshs.200 million, whereas Medium enterprises has employees from 50 to 99 people and may have a capital investment from Tshs.200 million to Tshs.800 million (Gabriel, 2017; URT, 2003).

Table 2. 1: Classification of SMEs Development in Tanzania

Category	Employees	Capital Investment
Micro Enterprises	1-4	Up to 5mil
Small Enterprises	5-49	Above 5mil to 200mil
Medium Enterprises	50-99	Above 200mil to 800mil
Large Enterprises	100+	Above 800mil

Source: Tanzania Small and Medium Enterprise Development Policy, (2003)

2.1.4 Small and Medium Enterprises (SME) Growth

SME growth is referred to as the accumulation of assets and is measured by the change in financial and employee growth (Ngugi et al., 2013) as cited by Matthews & Human, (2000). It is a function of employment, capital employed, improved service delivery, improved products, expansion of business premises, return on asset, return of equity and return on investment by the enterprise (Kikula, 2018; Mihić, Andrijana, Ostojić, Umihanić, & Fazlović, 2015; Rosli & Sidek, 2013). The study therefore measured SME growth in terms of employee's growth, asset growth, and capital appreciation through indexing.

2.1.4.1 Importance of SMEs in Tanzania

Elisante (2017), argues that about a one third of the Tanzania's GDP come from the SME sector and that because of the labour intensive status, this sector is important in the generation of employment which is actually the worldwide problem, proper utilization of local raw materials that large firms could not find its use or applicability using simple technology, is another importance of the sector. Addition of value to local resources, transfer of technology, acquire and adoption of technology as well as satisfying local market that are unserved by large enterprise is another pertinent issue that small and medium enterprises address.

2.1.4.2 Employment

This is referred to as any work under contractual arrangements involving material rewards (Keynes, 2018). It is an occupation for which one is paid²². It is a relationship between two contractual parties where work is paid for, where one party, which may be a company/corporation, for profit, not-for-profit organization, co-operative or other entity is the employer and the other is the employee.

2.1.4.3 Capital Growth/ Appreciation

Capital growth/ appreciation, is defined as the increase in value of an asset or investment over time. It is measured by the variation between the current value/market values, of an asset/ investment and its purchase price, the value at the time the asset or investment was acquired²³. It is also defined as the growth in the value of an asset over a period or the current value/market value of an asset or investment, to the quantity paid when you initially bought it²⁴. Capital growth may further be referred to as the profit made on an investment or purchase of an asset, measured by the increase in its market value over the invested amount or cost price²⁵

2.1.4.4 Asset Growth

Asset growth is the measure of total asset growth²⁶. For any business that sells products automatically it has assets. These assets may be fixed or current asset. Current assets are assets that you are expecting to settle within one business year and they consist of inventory, accounts receivable or your credit accounts, and your cash account²⁷. For any growing firm, it is expected that the firm will experience growth of assets, both fixed and non fixed assets. Current asset tend to fall and rise depending to customer demand while fixed asset remain fixed for a long period of time. The firm asset growth rate for year n is estimated as the percentage change in data from financial year $n-2$ to financial year ending year $n-1$, as under:

²² <https://www.thefreedictionary.com/employment> cited on 17/9/2018

²³ <https://www.investopedia.com/terms/c/capital-growth.asp> cited on 17/9/2018

²⁴ <https://economictimes.indiatimes.com/definition/capital-growth> cited on 17/9/2018

²⁵ <http://www.businessdictionary.com/definition/capital-growth.html> cited on 17/9/2018

²⁶ <https://www.stockopedia.com/ratios/asset-growth-5122/> cited on 1/6/2019

²⁷ <https://www.thebalancesmb.com/managing-asset-growth-in-small-business-firms-393516> cited on 1/6/2019

$$\text{ASSETG (n)} = \frac{\text{Data (n - 1)} - \text{Data (n - 2)}}{\text{Data (n - 2)}}$$

However, in this paper, due the fact that SMEs do not keep records for their assets and sales and inventories, the formula was not used to determine how assets grew but rather through a likert scale of three levels as they were used in Isaga (2012) in measuring asset growth.

2.1.5 Economic Development Theory: Theory of Innovation

Joseph Schumpeter, an economist and theorist defined development as the “Spontaneous and discontinuous change in the channels of flow, disturbance of equilibrium which ceaselessly alters and displaces the equilibrium state previously existing²⁸”. According to this theory, the discontinuation change of the channel of flow, he meant that innovation would cause the stoppage of the existing product and thereby introducing new product, modified or completely new, in the sense that innovation should cause discontinuity of the existing product, hence product development or product innovation. He further stated that, Innovation is a “change in existing production system to be introduced by the entrepreneur with a view to make profits and reduce costs”²⁹, stressing that the motive for innovation for an enterprise is to make profit and to be cost efficiency, impliedly leading to economic growth (the growth of SMEs would lead to the growth of economy of a particular locality). Therefore economic development occurs when circular flow is disturbed which is caused by the changes occurring in the economy and those changes arrive in the form of innovations of product, method of production, opening up of new market, establishing a new source of raw material supply and opening up of new business organization of any industry (Schumpeter,1934)³⁰.

He asserts that, an entrepreneur is the innovator who implements change within markets through the carrying out of new combinations and that these combinations may be in the forms; introduction of new good or quality thereof, introduction of a

²⁸ <http://www.economicdiscussion.net/schumpeters-theory/4-main-features-of-schumpeters-theory-of-economic-development/13001> cited on 13-08-2018

²⁹ <http://www.economicdiscussion.net/schumpeters-theory/4-main-features-of-schumpeters-theory-of-economic-development/13001> cited on 13-08-2018

³⁰ ³⁰ <https://businessjargons.com/schumpeters-theory-of-innovation.html> cited on 13 08 2018

new method of production, opening of a new market for the existing product, winning new source of supply of materials or parts, and running a new organization of any industry³¹

Innovation does not mean invention rather it refers to the commercialization and applications thereof in the manufacturing process and in the market place³². He argues that innovation in free enterprise is the major reason for amplified investments and business fluctuations³³. In this sense, amplified investment is hereby meant as free enterprise growth. Despite the fact that Schumpeter talks of innovation in five different forms, this study intends to deal only with two of the innovations forms, the product innovation and process innovation as they influence growth of SMEs.

2.1.5.1 Opening New Market

Schumpeter contend that firms grow when there is monopoly in the market; by finding new and more market segments in many parts of the community spreading the innovated product to many customers and therefore growth of the market for the product (Laino, 2011). Innovation is expected to create a monopoly that would eventually create market growth for the firms' product and thereby promoting growth for the firm. It is the branch of the manufacture for which the firm has not yet entered irrespective of the possibility that the market had existed before (Charles, Patrick, & Levison, 2018)

2.1.5.2 Conquering New Source of Raw Material Supply

The conquest of new source raw material or sub-manufactured goods for which the plant is going to be feed with is seen as an innovation for which it may help the growth of the firm. This new established source of raw material may influence the growth of the firm by conquering a cheap source of raw material whereby it counterparts have not yet discovered (Charles et al., 2018). This cheap source of

³¹ <http://www.economicdiscussion.net/schumpeters-theory/4-main-features-of-schumpeters-theory-of-economic-development/13001> cited on 13-08-2018

³² <https://businessjargons.com/schumpeters-theory-of-innovation.html> cited on 13 08 2018

³³ <https://businessjargons.com/schumpeters-theory-of-innovation.html> cited on 13 08 2018

supply helps to reduce the cost of production and thereby creates an enabling environment for the sale of the products at a low price in which would also help in increasing the market share of the product.

2.1.5.3 Carrying Out of New organization of any Industry

The carrying out of new business entity of any industry is seen as an innovation as far as Schumpeter is concerned. He viewed it as an innovation when an organization create “creative discontinuity” or “disruptive discontinuity” of the existing industries caused by the technological changes happening day today due globalization as it plays a big importance in industrial innovation and development (Bergeka, Berggrena, Magnussona, & Hobdaya, 2013). This concept means also that there is a creation of a monopoly position or breaking up of a monopoly³⁴. This opening of new business organization that the same industry or other industry is therefore considered by Schumpeter as an aspect of business development and hence firms’ growth as he iterates that any business seeking profit must innovate. According to him, innovation is the center of economic progress causing creative destruction, in *Capitalism, Socialism and Democracy* (Śledzik, 2013) constantly ceasing production of the previous business organization and constantly creating new ones.

2.1.6 Resource Based View Theory

According to this theory, business organizations that own strategic resources have competitive advantages over business organizations that do not³⁵. This theory contends that a resource is said to be strategic if rivals find it difficult to imitate or if it does, does so for a very high cost. Moreover, a resource is strategic if it is valuable, rare, inimitable or non-substitutable and that it is well organized³⁶.

Strategic resources can be produced because of bringing together several strategies and resources that everyone could be copied and bundling them as one in a way that

³⁴ <https://www.panarchy.org/schumpeter/development.html> cited on 21/9/2018

³⁵ <http://open.lib.umn.edu/strategicmanagement/chapter/4-2-resource-based-theory/> cited on 16 08 2018

³⁶ <http://open.lib.umn.edu/strategicmanagement/chapter/4-2-resource-based-theory/> cited on 16 08 2018

cannot be copied or imitated to enjoy competitive advantage. Firms that are able to develop dynamic capabilities are more advantageous. This means that a firm that enjoys a dynamic capability is skilled at incessantly updating its range of capabilities to keep pace with changes in its environment. This theory therefore contends that, SMEs need to be dynamic in innovativeness, if they want to enjoy competitive advantage in the market. To be able to do that strategic resources such as intrapreneurs an example of valuable resource that SMEs need to have. An intrapreneur is an entrepreneur within the firm or business organization (Weber, Trost, Wiethe-Körprich, Weiß, & Achtenhagen, 2014). The theory adds that, business organization can be innovative if it has resources (such as employees, capital, culture etc) which are strategic to the success of the business in this competitive edge. Consequently, to be innovative, a company must have intrapreneurs (employees with innovative ideas) who are willing and valued in the organization where their ideas would be taken on board for product or process innovation.

2.1.6.1 Valuable

Valuable resources give support in improving the organization's efficacy and efficiency while neutralizing the opportunities and threats of competitors. To achieve competitive advantage, resources need to be valuable.

2.1.6.2 Rarity

Valuable resources that are not rare may help to achieve competitive advantage in a short while before rivals are able to copy or find substitutes. A valuable resource is said to be rare if it is held by few or no other competitors possess such resources (Mweru & Muya, 2016).

2.1.6.3 Inimitability.

Refers to the resources possessed by a firm that is difficult to be imitated by competitors, such resource is a source of competitive advantage of the firm and firm with imitable resources cannot enjoy sustainable competitive advantage (Mweru & Muya, 2016; Newbert, 2008). Resources are inimitable or costly to copy when

they are involved in legal protection by intellectual property such as trademarks, patents rights, or copyrights³⁷

2.1.6.4 Organized to Capture Value

A strategic resource does not by itself bestow any advantage for a business if it is not structured to capture the value from them (Pesic, Milic, & Stankovic, 2013). A firm must put in order “its management systems, processes, policies, organizational structure and culture to be able to fully realize the potential of its valuable, rare and costly to imitate resources and capabilities”³⁸.

Nevertheless, to entirely appreciate this potential, a firm must also be organized to exploit its resources and capabilities, leading to the subject of organization as to whether a firm is organized to take advantage of the full competitive potential of its resources and capabilities (Barney, 1995)

2.2 Empirical Reviews

2.2.1 Influence of Innovation on SMEs growth

Ngugi et al (2013) did a study on examining the Influence of innovativeness on the growth of SMEs in Kenya. The study adopted the descriptive survey and exploratory design kind of methodology in the population of 4560 SMEs in Nairobi County. The sample size was 456(10%) of the population, through stratified random sampling. Variables were innovativeness and enterprise growth and results showed that at 5% significant level, P value was 0.007, the regression model had $R = 0.864$, which implies that innovation had a significant influence on the growth of SMEs and that innovation had strong linear relationship between innovation and SMEs growth.

Another study on the “Influence of innovation on small and medium enterprise (SME) growth- a case of garment manufacturing industries in Nakuru County” conducted by Martin and Namusonge, (2014) was done in Kenya the study used stratified random sampling and purposive sampling techniques to bring about the study sample of 46 respondents. Variables in this study were technological innovation, product innovation and process innovation. Data was collected through

³⁷ <http://open.lib.umn.edu/strategicmanagement/chapter/4-2-resource-based-theory/cited> 16 08 2018

³⁸ <https://www.strategicmanagementinsight.com/tools/vrio.html> cited on 16 08 2018

structured questions, open and closed question allowing the use of likert scale and data were analysed by use of descriptive statistics. It was found that there was a strong relationship between innovation and business growth. The study on the impact of innovation on Economic growth was conducted in European countries showed that firm owners underwent innovation due to Improving quality of their products (15.67%), access to new markets (13.07%), preserving current markets (12.77%), reducing production costs (12.57%), improving working methods (9.68%) (Gerguri & Ramadani, 2010). Another study conducted by (Ndemezo & Kayitana, 2017) in Rwandanese manufacturing firms showed similar results on the influence of innovation on the firms performance and moreover a study conducted by (Rahab, 2012) in Indonesian came with similar findings which prove that firms innovativeness had a affected firm performance positively.

Also a study on the “Impact of Innovation in Romanian Small and Medium-Sized Enterprises on Economic Growth Development”, results showed that Romanian innovation on (SMEs), play an important role in the economic growth development (Ionica, 2013). “Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs” was a study made to find the link between innovations – growth relationship. The finding from this study showed that innovation had a positive consequence on the performance of SMEs (Rosenbusch et al., 2011)

2.3 Conceptual Framework

This framework explains the relationship of the concepts that are placed in a logical and sequential design. It represent formal structure and used in this study to explain the existing theory based on specific concepts and propositions, derived from empirical studies and intuition. It clarifies and proposes relationships among variables and the concepts in a study and to provide a context for interpreting the study findings, explain observations and encourage theory development that is useful to practice in the future.

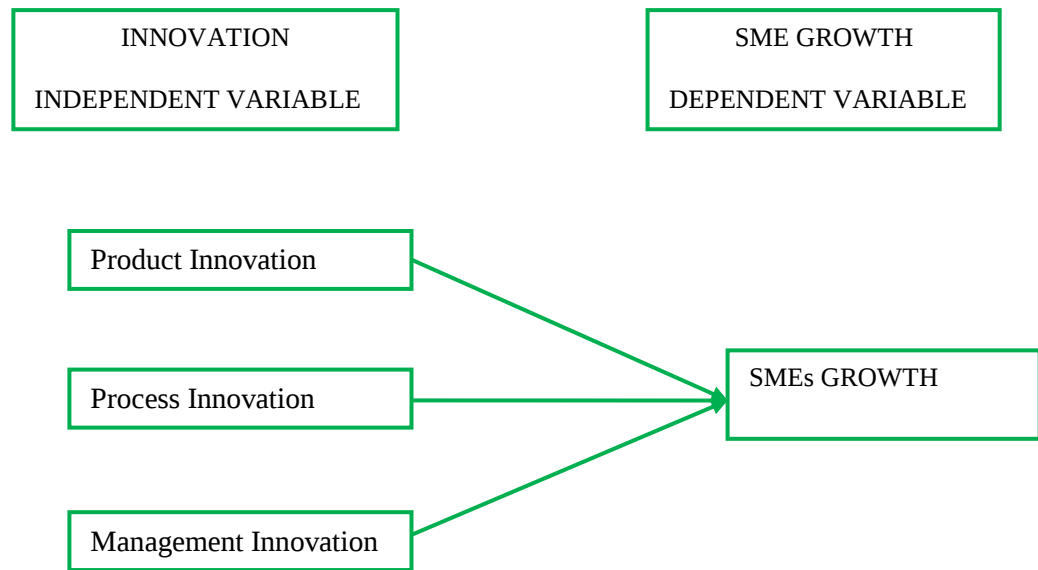


Figure 2. 1: Conceptual Frameworks.

According to Vivarelli, (2015), R&D has a positive relationship with labor. When R&D is conducted in order to improve a product (Product innovation), this kind of innovation leads to emergence of new firms and new sectors hence job creation. This implies that product innovation has a positive influence to the Employment growth as component of SMEs growth. Intrapreneurs are needed in the business organization to create and innovative products; therefore, the manager of the business would have to hire new innovative employees who will help move the firm to the higher height the management desires. To reach that height of success/ growth, employees are part of the organization success. Moreover, price and income compensation mechanisms can offset the first dislocation of workers that occurs following process innovation (the Compensation Theory)³⁹. In the study of the effect of innovation on employment in Latin America, it revealed that compensation effects are prevalent, and the introduction of new products is associated with employment growth at the firm level (Crespi & Tacsir, 2011; Lima & da Silva Müller, 2017). There is a consistent that innovation has an influence in the job creation at the firm, that is it creates employment opportunities and therefore employment growth. The study on the relationship between innovation and employment in services industry showed that innovation changed the employment pattern, the work that were carried out by men

³⁹ <https://wol.iza.org/articles/innovation-and-employment/long> cited on 10/9/2018

were changed to or shifted to be a female role (Faridah Djellal & Faïz Gallouj, 2015) and that it is a gender bias.

The relationship between innovation and employment is not linear at one part and may be linear at other part. There is an argument that employees are likely to contribute unrestrictedly effort and bear the risks involved in innovations if their employment is secured (Storey, Quintas, Taylor, & Fowle, 2002). This means therefore that, where the employee enters into permanent contracts with the firm, innovation influences the employment alas, where there is no contractual relationship with the firm for permanent employment, then innovation destroys employment. Putting in another way, innovation increases firms' growth through labour productivity being high, but reduces employment opportunities for employment (Peters, 2005), the report adds that, process innovation is important in the growth of a firm despite the fact that it repels employment as in helps the firm to meet new legal requirement or quality of the good.

Management innovation is positively links employment in the sense that management innovation intends to harness effectively the skills and knowledge of the employees (Hamel, 2006). The constant change in the management model creates rooms for more employment opportunity for innovative employees. Among other things that in the management innovation is the motivation (financial and non-financial) to the employees who perform extra-ordinarily or contribute high to performance of the firm. The management innovation which eventually alters the Management the activities of the managers such as strategic planning, capital budgeting, project management, hiring and promotion or motivation, employee appraisal, executive development, internal relations, are the instruments turning management principles on a daily basis practices (Hamel, 2006). All these management processes that may be newly introduce to the firm changes the habitual way of mangers and therefore they are forced to work in accordance to the new installed practice which ensures firm performance and hence growth.

H1: Employment is positively influenced by innovation activities of the firm.

H1a: Employment growth is positively influenced by product innovation of the firm

H1b: Employment growth is positively influenced by process innovation of the firm

H1c: Employment growth is positively influenced by management innovation of the firm

$$\text{Employment (E)} = \beta_0 + \beta_1 \text{ProdInn} + \beta_2 \text{ProcInn} + \beta_3 \text{MgtInn} + \varepsilon$$

According to Ongwen, there is a positive relationship between product innovations and financial performance (Ongwen, 2015). In this case, therefore product innovation is assumed to have also a positive influence the performance of SMEs capital growth as an aspect of financial performance. “The results of innovation provide a short lived competitive advantage that allows firms to obtain returns on innovation, such as higher sales and firm growth” (Bigliardi, 2013; Hsu, Tian, & Xu, 2014) and that innovation is highly related to the capital growth of the firm.

There are little or no studies relating process innovation and financial capital. However, we can infer the relationship between process innovation and financial capital in the following sense, that in the firm that is wishing to carry out process innovation, there must be a well-prepared financial resource/capital to support the undertaking of those innovations. That is to in order to innovate or to be innovative financial resources to buy technology and tools while the growth of the firm due to improved product quality and revenues due to higher sales of goods, the firm grows it capital. In this case, therefore it can be seen that there is a reciprocity relation between process innovation and capital appreciation in the firm. Capital enhances innovation and thereafter innovations enhances capital growth

The success of any other types of innovation such as product innovation and or process innovation can only be sustained when it is accompanied by organization (management) change (Sapprasert, 2008). Other literature add that there is a positive connection between persistence of organizational innovation and firm performance, that is to say, firms can gain more from organizational change by innovating tirelessly (Sapprasert, 2008). Firms’ structure, knowledge management system and external relations have shown to have contribution to growth. The management

mindsets to innovativeness helps capital growth through developing new control mechanism that close all small sinkholes where resources used to spillover. This control of the use of resource will tend to accumulate capital and therefore capital growth.

The study conducted in Croatia on the role of organizational innovation in achieving and maintaining company's business excellence found that there was an existence of a positive relationship between innovation output, and business performance (Mihic, Andrijana, Ostojic et al., 2015); measuring the amount of sale of new products, increase of the total number of employees, value added, sales, profit and return on assets and that all these indicators showed a positive relationship with organization innovation. However, when capital was replaced by labour/employment; innovation has a negative influence to employment (Braunerhjelm & Ding, 2016). This implies that, the capital-intensive kind of innovation destroys labour or employment opportunities. Robots and other computer-controlled machines that are more efficient and effective than human being will take place driving the employee out of labour. However, improvement in the organization structure may influence capital growth indirectly.

H2: Capital growth is positively influenced by innovation activities of the firm

H2a: Capital growth is positively influenced by product innovation by of the firm

H2b: Capital growth is positively influenced by process innovation by of the firm

H2c: Capital growth is positively influenced by management innovation by of the firm

Model: Capital (K) = $\beta_0 + \beta_1 \text{Prodinn} + \beta_2 \text{ProcInn} + \beta_3 \text{MgtInn} + \varepsilon$

In the study, "The Financial Rewards of New Product Introductions in the Personal Computer Industry" conducted by Bayus, Erickson, and Jacobson, (2003) it was found that introduction of new product in the market had influenced profit rate and firm size as reflected in asset growth. The new product introduced in the market increases asset growth in the firm as its advertisement needs becomes low as compared to older products (Bayus et al., 2003). When product were innovated, there

would be an increased production quantity which would lead to the expansion of assets like land and building motor vehicles for transporting the product and the quality products produced would therefore attract customers for which sales are likely to grow. Moreover, to make such sort of innovations, machinery kind of assets were being needed to increase the number of assets in the firm. It is likely that no product innovation may be done with the use of the previous machines and tools, new machines must be procured to cope with the innovation need hence asset growth.

A good innovation is the one that is done to meet customers demand, needs and expectation, market trend, design products and services to create improved lives to for a longer period (Karabulut, 2015). With reference to this study, process innovation is intended to improve customers lives by improving the quality of the good, quantity of the good and that can last long(durability). It was expected that while making sure that the process innovation is successful to meet customers' wants, firms progressively add asset such as machinery, delivery vans, buying more land and building more stores. This would eventually increase total asset that the firm owns

In the study, “innovative capacity and asset growth anomaly”, it was found that there was a negative relation between asset growth and low innovative capacity firms, whereas there were no asset growth anomaly for high innovative capacity firms with the asset growth in these firms (Kumar & Li, 2012), meaning that there was a positive relation between asset growth and innovative capacity of the firms.

H3: Asset growth are positively influenced by innovation activities of the firm

H3a: Assets growth are positively influenced by product innovation of the firm

H3b: Assets growth are positively influenced by process innovation of the firm

H3c: Assets growth are positively influenced by management innovation of the firm

Assets (A) = $\beta_0 + \beta_1 \text{Prodinn} + \beta_2 \text{Proclnn} + \beta_3 \text{Mgtlnn} + \epsilon$

Management innovation is an important as it results into management breakthrough that can deliver a compelling advantage to the innovating company and produce a

shift-effect in industry leadership (Hamel, 2006). The innovation in the management style, thinking, and adoptive mind in the challenge of the company is more important than any innovation that takes place in the industry. When management is innovative, then any breakthrough in the firm is possible if there are resources or capital (human resource/capital) to do that. The growth of SME therefore is highly linked with the management innovation. The importance of management innovation to SMEs is that they are difficult to observe, identify the system, any law cannot patent them (Birkinshaw et al., 2008).

2.4 Research Hypothesis

H1: Employment is positively influenced by innovation activities of the firm.

H1a: Employment growth is positively influenced by product innovation of the firm

H1b: Employment growth is positively influenced by process innovation of the firm

H1c: Employment growth is positively influenced by management innovation of the firm

$$\text{Employment (Eg)} = \beta_0 + \beta_1 \text{Prodinn} + \beta_2 \text{ProcInn} + \beta_3 \text{MgtInn} + \varepsilon$$

H2: Capital growth is positively influenced by innovation activities of the firm

H2a: Capital growth is positively influenced by product innovation by of the firm

H2b: Capital growth is positively influenced by process innovation by of the firm

H2c: Capital growth is positively influenced by management innovation by of the firm

$$\text{Model: Capital (Kg)} = \beta_0 + \beta_1 \text{Prodinn} + \beta_2 \text{ProcInn} + \beta_3 \text{MgtInn} + \varepsilon$$

H3: Asset growth are positively influenced by innovation activities of the firm

H3a: Assets growth are positively influenced by product innovation of the firm

H3b: Assets growth are positively influenced by process innovation of the firm

H3c: Assets growth are positively influenced by management innovation of the firm

$$\text{Assets (Ag)} = \beta_0 + \beta_1 \text{Prodinn} + \beta_2 \text{ProcInn} + \beta_3 \text{MgtInn} + \varepsilon$$

2.5 Conclusion

The future and survival of the world enterprises was based on their ability to be adaptive and innovative. Without it, we are likely to see Small and Medium Enterprises (SME) exit the market for failure to be competitive, cost efficiency and poor product quality (Gerguri & Ramadani, 2010).

For an enterprise to manage the global competition it requires that small and medium enterprises to re-evaluate their competitive position in relation to their competitors, taking innovativeness as a tool. The study done in Malaysia on the impact of innovation on performance of SMEs, results revealed that firm performance had been influenced by product innovation and process innovation significantly, where the impact of the former was stronger than the latter (Rosli & Sidek, 2013). In this study innovation is seen as an important factor for SMEs to battle against customers wants, increase revenue and market segmentation.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter deals with the research methodology that was used in this the study. It describes the research design of the study, the setting where it was conducted, the sampling design used, the instruments involved in data collection, as well as the procedures adopted for data collection. Statistics used for data analysis and description of the way data analyzed are discussed.

3.1 Research design

The survey method was adopted for this research since it was considered the most suitable type of approach in terms of gathering firsthand information from respondents in the field, time and resource saving. It was a survey study opting cross-sectional quantitative research design.

3.2 Geographical location/Study Area

The study was conducted in Dodoma City Municipal. This is one of the five district of Dodoma region. Chemba district, Kondoa district, Kongwa district, Mpwapwa district. Dodoma City (Urban) is bordered by two district, Chamwino District in the north, east and South and Bahi district in the north and in the west. Dodoma city was covered by Mnadani ward, Chang'ombe ward, Makole ward, Majengo, Viwandani and Madukani ward, Nkuhungu, Nkonze, Miyuji ward and Kisasa. The reason for selecting the study area that, the area was central to the study problem. Many innovation wood and steel furniture industries are available and that they are mushrooming.



Figure 3. 1: Map of Dodoma Region showing the area of study in Dodoma Urban

3.3 Sampling design

This study used both purposive and probability sampling design. It is purposive because, the population of small and medium enterprise is so scattered and the availability or contact is difficult. In this case the researcher used purposive sampling design to select all registered SMEs. Probability sampling design was also used to determine the sample size using the registered firms in the study area.

3.3.1 Population of the Study

The target population of the study was wood and steel furniture manufacturing (SMEs). According of Dodoma City Municipal Trade Office, there were 397

furniture-making industries of which 195 were Wood furniture manufacturing industries, whereby 58(29.7%) were registered with the Dodoma City Council and 202 were Welding /workshops, of which 60(29.7%) were registered. This area was selected for the study because it is the area where wood and steel furniture SMEs are flourishing in many parts of the city. Many individual were engaging in the mending and manufacturing of modern furniture and many of them used new materials such as medium density fibreboards (MDF)



Figure 3. 2: Material used in the making of Modern Furniture

3.3.2 Sample Frame

The Sampling frame of this study was 118 SMEs population of which 58 were wood furniture manufacturing and 60 were steel furniture manufacturing SMEs.

3.3.3 Sampling Techniques

The study used purposive sampling and probability sampling procedures. Purposive sampling was used to select only firms that were registered in the area of study. This could help in tracing their whereabouts. Probability sampling was used to determine the sample size to be used in the study. In the study area, there were 118 registered SMEs. Where Sloven/Yamane sample size formulation for determination of sample size have been used.

$$n = N / (1 + N e^2)$$

$$\frac{N}{(1+Ne^2)} = \frac{118}{(1+118 \times 0.05 \times 0.05)} = \frac{118}{1.295} = 91 \text{ SMEs}$$

Where

n = Sample size

N = Population

e = Tolerance level

3.3.4 Sample Size

The sample size of this study was 93 respondents whereby 91 in total of the registered SMEs and 2 key informants from the successfully growing SME owners. Out of 91-sample size, 45 were from wood furniture manufacturing and 46 from steel furniture manufacturing industries. In an attempt to have more adequate representative sample size, the researcher interrogated 110 respondents which after screening the data provided by the respondent, it was noticed that some of the respondents provided wrong answers to some questions and therefore upon scrutiny, the researcher discarded all the questionnaires that were attempted wrongly and remained with 91 fresh ones.

3.3.5 Unit of analysis

In this study, the unit of analysis was individual SMEs of wood and steel furniture manufacturing.

3.4 Independent Variables and Measurement

3.4.1 Product Innovation

Product innovation was measured by introduction of new goods in the market, quality improved goods, new design, use of new materials or components. The variable was measured by five level likert scale, from very low influence to strongly disagree, agree, neutral, Agree, Strongly.

3.4.2 Process Innovation

This was measured by the extent through which novel changes in techniques, equipments/tools and delivery methods. Likert scale of up five levels or the financial statements measured each of the variables where possible. That is whether

innovation has a strongly disagree, agree, neutral, Agree, Strongly agree that there is influence in the growth of SMEs. Where 1= ***strongly disagree*** and 5= ***strongly agree***. Financial statement could have been used to measure the influence of innovation in manufacturing SMEs capital increase where available; unfortunately no firms prepared such statement of financial.

3.4.3 Management Innovation

This variable was measured by looking the processes that govern the conduct of managers, new ways to organize, lead, coordinate and motivate workers to be innovative, Support innovate ideas. A five point's likert scale and/or the financial statements measured each of the variables where possible. If the SMEs had financial statements then financial statement could used to measure the influence of management innovation on SME growth. That is, a strongly disagree, agree, neutral, Agree, and strongly agree. Financial statement may be used to measure the influence of innovation in manufacturing SMEs capital increase.

3.5 Dependent Variables and Measurement

3.5.1 SMEs Growth

Small and medium growth variable was measured by variables total asset, employment growth, and capital growth. These variables in the SMEs growth were measured by a three level likert scale, 1 = Decreased, 2 = Remained the same and 3 = Increased was used to measure the dependant variables.

Table 3. 1: Measurement of Dependent Variable (Measures of SME growth)

Variable	Definition of variable	Indicators	Measurement
Independent SME growth	Number of employees	Real number of employees working for the period of five years	Likert scale of three levels 1 = Decreased 2 = Remained the same 3 = Increased(Isaga, 2012a)
		Trained and got skills by the firm	
	Capital appreciation /growth (financial capital)	Real figures of capital for the period of five years. Or by likert scale of three levels 1 = Decreased 2 = Remained the same 3 = Increased	Market values of an asset Financial statement Or by likert scale of three levels 1 = Decreased 2 = Remained the same 3 = Increased
	Asset growth Historical growth rate $\left(\frac{P_2}{P_1}\right)^{1/n} - 1$ for each year P = Price of asset n = Number of year for the two price points	Real values of asset each years for the period five years Or by likert scale of three levels 1 = Decreased 2 = Remained the same 3 = Increased(Isaga, 2012a)	Likert scale of three levels 1 = Decreased 2 = Remained the same 3 = Increased

Measurement of Independent Variables (Factors influencing SME growth)

Independent Variable	Definition of variable	Indicators	Measurement
Product Innovation	✓ Introduction of new model /improved products manufactured in the firm	1. Strongly Disagree	Likert scale
	✓ Quality product innovated and manufactured in the market	2. Disagree Agree	
	✓ Manufacture products from new raw materials(Karabulut, 2015a)	3. Neutral	
	✓ Delivery methods	4. Agree	
	✓ One patent product which is manufactured(Karabulut, 2015a)	5. Strongly Agree	
	✓ High-tech tools and equipment used for product manufactured by firm(Karabulut, 2015a)		
Process Innovation	✓ Novelty /changes in techniques, Equipments/tools(Karabulut, 2015a)		Likert scale
	✓ Control of cost in production process.	1. Strongly Disagree	
	✓ Improved value chain in the PDM recorded.(Karabulut, 2015a)	2. Disagree Agree	
	✓ Computer Software/ Program aiding to accomplish jobs	3. Neutral	
	✓ Changes in manufacturing	4. Agree 5. Strongly Agree	

Variable	Definition of variable	Indicators	Measurement
Management Innovation	✓ methods(Karabulut, 2015a)		
	✓ Intranet, database training and practices to improve knowledge share.		
	✓ Outsourcing. I.e. purchasing, recruiting, technological support, consulting not used in our firm.	1. Strongly Disagree	
	✓ Quality management systems such as TBS(Karabulut, 2015a)	2. Disagree Agree	
	✓ New ways of Planning	3. Neutral	
	✓ New ways of organizing works	4. Agree	
	✓ New ways of Staffing employees	5. Strongly Agree	
	✓ New ways of Directing		Likert scale
	✓ New ways of Controlling		
	✓ Motivation to innovative worker,		
	✓ Support innovate idea		

3.5 Data types and sources of data

3.5.1 Primary and Secondary data

3.5.1.1 Primary data

Primary data is referred to as data that collected by a research directly from the field by the use of surveys, interviews, observation or experiments according to his or her need (Oluwatosin Victor Ajayi, 2017). In this course of study the sources of the primary data were individuals SMEs and key informants from successful enterprise managers or owners. Primary data was collected through self-administered questionnaire from owners of SMEs and there was a mixture of both and closed ended questions to allow respondents the freedom to feel more answers that could not satisfy the closed ended question for extended answers. Interview was used to collect data from key informants whereby they provided some clarification of the information provided by the respondents.

3.5.1.2 Secondary Data Collection

On the other hand, secondary data refers to information gathered from sources that already exist.

3.5.2.1 Documentary Review

Reports and journals (published and unpublished) from SIDO and Ministry of Industry and Trade or Dodoma City Trade office. Documentary review method was

used to collect any existing information about the way innovation may have or had been influencing SMEs growth for some time back. This is because SIDO, the organization formed to ensure that small industry sector flourishes and therefore there may be some data or information relating to the growth of small business (SMEs) in the country, Dodoma in specific.

3.5.2 Observation

Observation is the first step, in which the researcher senses certain changes have occurred or are occurring, or some new behaviors, attitudes, and thinking are developing in one's environment or the workplace. Observation method for primary data collection was used with the help of checklist and camera was used as a tool to collect the information. Observation was only done to see the products produced with the innovativeness applied such as the use of new material, new equipment used to modify products and how those products were processed.

3.5.2.2 Validity and Reliability

Data collected were tested for reliability using cronbach reliability test. Cronbach's alpha is a measure of internal consistency, how closely related a set of items are as a group from questionnaires. Reliability of the measure was observed by taking measurement cronbach $\alpha > 0.7$ and to ensure there is validity of the questionnaire, we used pre-determined instruments to measure the variable such a way that we had no reason to conduct a pilot study to test the questionnaire. The study done in Turkey on the Effects of Innovation Types on Performance of Manufacturing Firms in Turkey (Karabulut, 2015a) and the study on Entrepreneurship and the growth of SMEs in the furniture industry in Tanzania (Isaga, 2012). Therefore scale and items to be included in the variables were taken for those studies to ensure validity and reliability and therefore threw us no need to test the variables and scales.

3.6 Data Analysis Method

Before analysis, data was edited, cleaned through removing questionnaires that were incomplete or have missing or inappropriate answers and data was coded and lastly data was entered into IBM SPSS version 23. Excel was also used in the regression analysis. Factor analysis was used to determine which factors in the variable are most

important than others and therefore use those factors which are more strong in the analysis.

3.6.1 Quantitative Data Analysis

3.6.1.1 Inferential Statistics

3.6.1.2 Multiple Linear Regression Analysis (MLRA)

SMEs growth was regressed alongside three variables, that is, product innovation, process innovation and management innovation.

It was expected that the entire three objectives be analysed quantitatively using the multiple regression analysis adapted model for regression analysis (Maradana et al., 2017; Ngugi et al., 2013)

Multiple Linear Regression Modeling

$$\text{SMEg}(Y) = \beta_0 + \beta_1\text{ProdInn} + \beta_2\text{ProcInn} + \beta_3\text{Mgt} + \mu$$

$$Y = \beta_0 + \beta_1\text{ProdInn} + \beta_2\text{ProcInn} + \beta_3\text{Mgt} + \mu$$

The above equation can be written also as

$$\text{SMEg}(Y) = \beta_0 + \beta_1\text{Innovation} + \mu$$

Where

Y = SMEs growth,

β_0 = Constant(coefficinet of intercept)

$\beta_1 \dots \beta_3$ = Regression Coefficients of the three variables

ProdInn = Product innovation;

ProcInn = Process innovation and ;

Mgt = Management innovation.

μ = Variables/ Innovation that may be influencing the growth of SMEs

but not included in the model..

Analysis of variance (ANOVA) was used to test the significance of overall model at 95% level of significance.

3.6.2 Qualitative Data Analysis

Qualitative data refer to information gathered in a narrative form through interviews and observations. Responses from the managers who provides their response orally in different ways were organised to see the different categories under which they fall and the extent to which the same kinds of responses were spoken by the managers of the given SMEs. Then similar responses were given numbers (coded) for analysis.

3.7 Summary, Conclusion and Policy Implication

3.7.1 Conclusion

It was the chapter that dealt with methodology that used to conduct the study by explaining the assumptions underlying the research, variables, research framework, and hypothesis, sampling design and data analysis techniques that were used in this study. In general, the data were collected from primary source through questionnaire survey.

3.8 Ethical Issues

This study adhered to confidentiality and anonymity of the respondents. Information from the respondents was gathered without the use of names and contact address of the respondents. Besides the researcher was liable to protect the rights and interests of all respondents such that each respondent was free to participate in this study at his/her own will.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.0 Introduction

This chapter of the report provides findings of the research data analysed from 91 steel and wood furniture entrepreneurs in the furniture-manufacturing subsector. The analysis is partitioned into three parts. The first part is the presentation of descriptive statistics of demographic data of respondents; the second portion/part is factor analysis of the items used to measure product innovations, process innovations and management innovation as well as employment performance, capital performance and asset performance of the furniture manufacturing firms. The third portion or part eventually presents the testing of hypotheses that were established in chapter three, the methodology. The title of the study was **Influence of innovation on small and medium enterprises (SMEs) growth in Dodoma city**, Dodoma region in an attempt to achieve the objectives. The objectives of this study was, to determine the extent to which product innovation influence the growth of wood and steel manufacturing SMEs, determine the extent to which process innovation influence the growth of wood and steel manufacturing SMEs and the extent to which management innovation influence the growth of wood and steel manufacturing SMEs. Data were edited, coded and analysed through IBM SPSS (23) a computer software, both descriptive and inferential analysis were conducted.

4.1 Demographic Characteristics

This part provides characteristic features of the respondents used in this study. This includes age, sex, marital status and the level of education of the respondents. This information is useful as it helps in the comparing and linking with other information to determine whether there is any associations among the data collected and analysed to bring meaningful information.

4.1.1 Gender of Respondents

In this study, a sample of 91 steal and wood furniture entrepreneurs were used. Out of 91 respondents, 98.9% (n=90) were men and only 1.1% (1) of the respondent was a woman. This woman however, did not participate in the total process of marking

furniture but firm owner. This information tells us that, the Wood and steel furniture manufacturing subsector is a male dominant, and that women are not encouraged to engage in the subsector, this may be due to cultural factor (Isaga, 2012) as it is shown in the table below. There are no known factors rendering to this phenomenon probably it is seen more of masculine nature. This masculine nature does inhibit women from participating in the subsector.

Table 4. 1: Sex of Respondents

Sex	Frequency	Valid Percent (%)	Cumulative Percent (%)
Males	90	98.9	98.9
Females	1	1.1	100.0
Total	91	100.0	

Source: Research Findings, (2019)

4.1.2 Marital Status of Respondents

It has been observed that in the wood and steel furniture-manufacturing subsector, majority of the respondents engaging are married. About 94.5 %(n= 86) had been married and only 5.5 %(n= 5) were single. This may be due to the fact married men struggle to make sure that they present food at the table at the end of the day to feed the children and wives and moreover to be able to meet other errands such as school fees, medical services for children and strive to get out of poverty and responding to the call of establishing Tanzania of industry by engaging in the production of furniture in the wood and steel manufacturing industry. The table below presents the percentages of married and singles in the study area.

Table 4. 2: Marital Status of Respondents

Marital status	Frequency	Valid Percent (%)	Cumulative Percent (%)
Single	5	5.5	5.5
Married	86	94.5	100.0
Total	91	100.0	

Source: Research Findings, (2019)

4.1.3 Education Level of Respondents

The education of respondents shows that 51.6 % (n= 47) had only completed primary education, 24.2% (n=22) of respondents had primary education and at least with training from VETA, 15.4% (n=14) had completed a secondary education and were able to attend some training before they were engaged in the woods and steel

manufacturing subsector. Only 1.1% (1) respondent had reached a diploma level and engaged in the industry. It is an important sector for the growth of the country's economy yet its majority practitioners had only primary education. This may have an impact on the management innovation of their firms, suppressing new ideas that may seem costly or ineffective in the face. There had little done in the management innovation to improve the physical distribution management and the reduction of costs through registering firms to authorities where only 29.7% (118) wood and furniture manufacturing firms were registered in total and 70.3% (279) were not registered to the respective authority. Due to their inadequate education, many firm owners do not find the importance of formalizing their business and they continue to operate in the state where they are not loan able by the financial institutions that could help in the growth of the business through increase capital.

Table 4. 3: Education Level of Respondents

Education level	Frequency	Valid Percent (%)	Cumulative Percent (%)
Primary Education	47	51.6	51.6
Primary + Training	22	24.2	75.8
Secondary	7	7.7	83.5
Secondary + Training	14	15.4	98.9
Ordinary Diploma	1	1.1	100.0
Total	91	100.0	

Source: Research Findings, (2019)

4.1.4 Age of Respondents

Out of 91 respondents involved in the woods and steel furniture-manufacturing subsector study, 63.8% (n=58) were youths. This may probably mean that youth have found refuge in the wood and steel furniture-manufacturing subsector. This may also mean that more efforts may be directed to this category of youth by financing and equipping youth with capital and knowledge on how to manage their businesses. Approximately 36.2% (33) respondents were of middle age, where some of youth who had been incubated by this group had graduated and therefore left to start their own business firms.

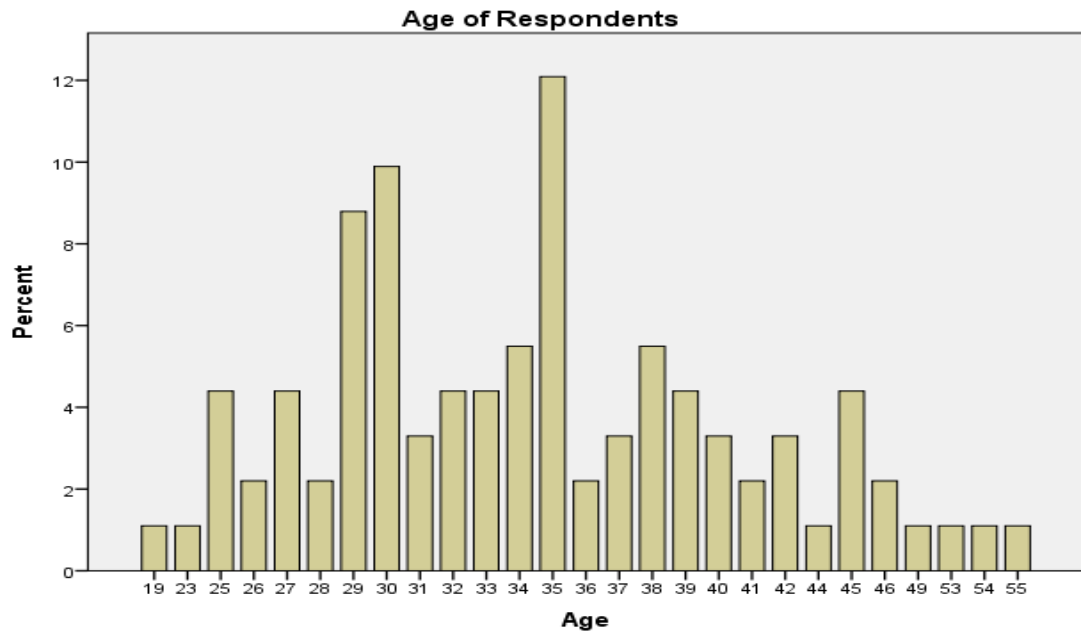


Figure 4. 1: Bar Chart showing the age of respondents

Source: Research Findings, (2019)

4.1.5 Age of the Wood and Steel Manufacturing Firms

Many of the wood and steel subsector-manufacturing firms that were involved in the study were young. The mean age of the firms was 7.5 years that shows some kind of relationship with the age of the firm owners who were involved in the study. The shape of the histogram chart below which is skewed to the left can support the assertion that in the area of study there was a growing trend by youth to establish new firms in the wood and steel furniture-manufacturing subsector. The horizontal growth of this subsector business is probably more rapid than the vertical growth (growth of sales, capital, assets, employment, and other measures for growth).

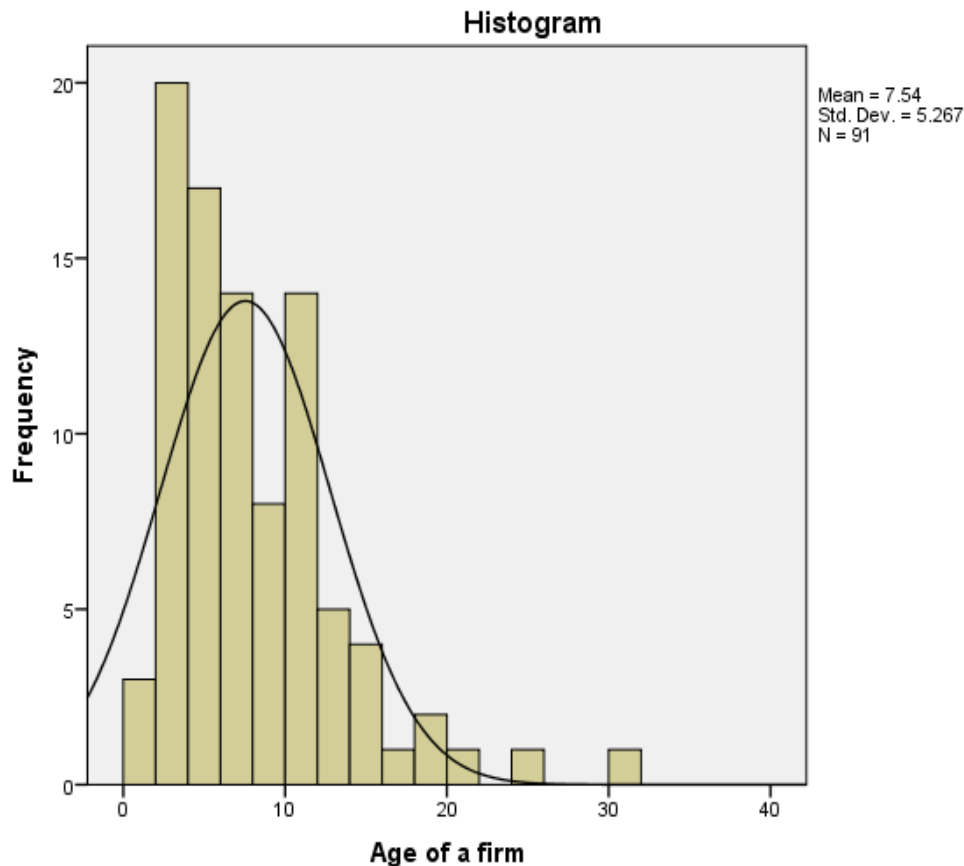


Figure 4. 2: Showing the mean age of the firms in the study area

Source: Research Findings, (2019)

In the contrary, this may also mean that there were more innovations in these firms than in the firms which are old taking into account that younger firms are more innovative than older firms; however depending on the type of innovation like incremental innovation which helps to change features of the product from that of the previous (product innovations) as it was described by Joseph Schumpeter in his “creative destructive” innovation in his book, “The Theory of Economic Development: An inquiry into profits, capital, credit, interest and the business cycle” (Śledzik, 2013). Schumpeter stated that the most significant innovations are not introduced by established firms, but by outsiders, by ‘new men’ who set up ‘new firms’; a recognition that is now well confirmed⁴⁰

⁴⁰https://www.researchgate.net/publication/313083079_The_theory_of_economic_development_An_inquiry_into_profits_capital_credit_interest_and_the_business_cycle cited on 27/3/2019



Figure 4. 3: Showing the age of the firms in the study area

Source: Research Findings, (2019)

If the assertion “smaller enterprises are more innovative than larger enterprises” is considered right, then we expect that smaller enterprise (firms) to be proactive to product innovation that is motivated by increased incremental innovation in the furniture industry that is being improved day after day than larger enterprises.

4.1.6 Firm Characteristics

It was observed that all the firm in the study area 100% (n = 91) were micro firms as they had employed people between 2 to 4 (22%) of the total respondents and the rest of the firms were small 78 % (n=83) as the table shows, there were no firm that had employed above 15 employees. Majority of these small firms were young firms between the age firm of 1 and 5 years.

Table 4. 4: Employees of Firms in the Area

Employees	Frequency	Valid Percent	Cumulative Percent
2	3	3.3	3.3
3	5	5.5	8.8
4	12	13.2	22.0
5	21	23.1	45.1
6	17	18.7	63.7
7	12	13.2	76.9
8	13	14.3	91.2
9	4	4.4	95.6
10	3	3.3	98.9
15	1	1.1	100.0
Total	91	100.0	

Source: Research Findings, (2019)

4.1.6.1 Additional information

All the firms involved in the study were sole proprietors. They were owned by individuals who employed their fellow family members, or youth who wanted to earn a living. However, it ended up being a recruiting or incubation firms. This is due to the reason that many of the youth who were employed in the firms worked for some years and when they had acquired necessary skills to work independently, they left work and established their own firms. It can be seen that 59.3% of the firms had less than 7.5 years mean age of the firms, 17.6% (16) of the firms had just 3years of establishment. Many of the owners of these small firms left those firms with at least 10Yrs of operation and above and went to open their own.

Table 4. 5: Age of a Firm

	Frequency	Valid Percent	Cumulative Percent
1	3	3.3	3.3
2	4	4.4	7.7
3	16	17.6	25.3
4	8	8.8	34.1
5	9	9.9	44.0
6	8	8.8	52.7
7	6	6.6	59.3
8	5	5.5	64.8
9	3	3.3	68.1
10	12	13.2	81.3
11	2	2.2	83.5
12	2	2.2	85.7
13	3	3.3	89.0
15	4	4.4	93.4
16	1	1.1	94.5
18	2	2.2	96.7
21	1	1.1	97.8
25	1	1.1	98.9
30	1	1.1	100.0
Total	91	100.0	

Source: Research Findings, (2019)

4.2 Factor Analysis Results

Factor analysis was conducted to test items used to measure employment performance, capital performance and asset performance for dependant variable as well as items used to measure product innovation, process innovation and management innovation for the independent variables. In this case, therefore, factor analysis was used to measure internal consistence with each other and reduce items to the number, which were seen measuring the same thing. Items that were seen measuring different things were eliminated in the summation.

4.2.1 Items measuring Dependent Variable

4.2.1.1 Employment Performance Correlation

Four items were used to collect information about employment performance in the selected steel and wood manufacturing firms (for more information see questionnaire in the appendix 1). Below is the table showing the total variance explains where component four (4) did not meet the qualification but however was not removed because in an attempt to remove it from among the items, it happened to affect the total results. Since it is above 0.5, then it was included in the summation of items

though it was less than 0.7 total Eigen value. Therefore, factor analysis was used to screen the items to be retained in the measurement of employment performance.

Table 4. 6: Total Variance Explained

Component	Initial Eigen values		
	Total	% of Variance	Cumulative %
1	1.613	40.337	40.337
2	1.128	28.188	68.525
3	.852	21.301	89.825
4	.687	10.175	100.000

Source: Research Findings, (2019)

Adequate correlation were found among items measuring employment performance and therefore allowed to perform factor analysis for the items measuring performance of the employment in the growth of the wood and steel furniture subsector.

Table 4. 7: Correlations matrix for items measuring Employment Performance

	Employees 1	Motivation 2	Employee Turn up 3	Intrapreneurs 4
Employees 1	1			
Motivation 2	.542 **	1		
Employee Turn up 3	.485**	.368**	1	
Intrapreneurs 4	.334**	-.18	.345**	1

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

Source: Research Findings, (2019)

Factor analysis was done to test the items in the employment growth for the independent variable and they were all seen above 0.7 general rule in this study and therefore all items were used in the summed variable (see table 4-8 below).

Table 4. 8: Factor Analysis for Employment Performance

Items	Component 1
Motivation 2	.898
Intrapreneurs 4	.860
Employees 1	.757
Employee Turn up 3	.742

Source: Research Findings, (2019)

4.2.1.2 Capital Performance Correlation

Also in determining whether the items in the determining capital performance are adequately, enough measured the same thing, in the collect information about capital performance in the selected steel and wood manufacturing firms. All items were highly significant indicating that they were right items for the measure of capital performance

Table 4. 9: Correlations Matrix for items Measuring Capital Performance

	Capital 1	Capital 2	Capital 3	Capital 4
Capital 1	1			
Capital 2	.315**	1		
Capital 3	.370 **	.297**	1	
Capital 4	.530**	.258**	.333**	1

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

Source: Research Findings, (2019)

4.2.1.3 Asset Performance

In determining whether the items in the determining asset performance are adequately in the collect information regarding capital performance in the selected steel and wood manufacturing firms and it was realised that, items were significantly correlated indicating that they were right items for the measure of asset performance in the growth of the firms.

Table 4. 10: Correlations Matrix for Items Measuring Asset Performance

	Asset 2	Asset 1	Asset 3	Asset 4
Asset 2	1			
Asset 1	.512**	1		
Asset 3	.433**	.543 **	1	
Asset 4	.419 **	.314**	.322 **	1

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

Source: Research Findings, (2019)

Correlation of items measuring the growth of SMEs in the wood and steel subsector, were determined and were seen to be correlated significantly. Employment performance, capital performance and asset performance were taken to be tested to see how they contributed in the growth of entrepreneurial enterprises in the field of furniture. Below is the table showing the correlation among themselves

Table 4. 11: Correlations of Items Measuring Dependant Variable

	Employment Performance	Capital Performance	Asset Performance
Employment Performance	1		
Capital Performance	.633 **	1	
Asset Performance	.745 **	.730 **	1

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

Source: Research Findings, (2019)

4.2.2 Factor Analysis Results of Independent Variables

Five items that would make a composite of one variable factor together measured all product innovation and Process innovation. Four items that would also create one variable factor to test how all together and independently contribute to the growth of furniture manufacturing firms measured management innovation.

4.2.2.1 Correlation Matrix of Items measuring Product Innovation

Five items measured product innovation as it is explained above, P1 to P5, for statement rendering to the items explained, seen table 4-11 below. All the items were seen to have significantly correlating indicating that items would suitably be used to create a common variable factor to measure the influence of product innovation to firm growth.

Table 4. 12: Correlations Matrix for Items Measuring Product Innovation

	P2	P1	P3	P4	P 5
Product 2(P2)	1				
Product 1(P1)	.649 **	1			
Product 3(P3)	.512 **	.546 **	1		
Product 4(P4)	.498 **	.548 **	.484 **	1	
Product 5(P5)	.575 **	.535 **	.629 **	.704 **	1

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

Source: Research Findings, (2019)

The items in the table below may suggest that generally that they may be used in totality to be used to measure or create variable measuring product innovation factor.

Table 4. 13: Factor analysis for items measuring Independent Variables

Items	Factor loading	Cronbach α
PRODUCT INNOVATION	1	.867
P5. I have high-tech tools and equipment used for product manufactured by firm	.856	
P1. I have introduced of new model /improved products manufactured in the firm	.809	
P4. I have new receive new product ideas from customers and accommodate to our firm	.801	
P2. I have quality product innovated and manufactured in the market	.798	
P3.I have manufactured products from new raw materials	.781	
PROCESS INNOVATION		.769
Pr5. I have made improvement in the control of cost in production process	.965	
Pr1. I have introduced novel /changes in techniques in production of furniture	.955	
Pr3. I have improved value chain in the Physical Distribution Management (PDM) and recorded.	.835	
Pr4. I have changes in manufacturing methods through introduction of new machinery	.786	
Pr2. I have new modern equipments/tools that aid manufacturing	.767	
MANAGEMENT INNOVATON		.750
M1. I have intranet, database training and practices for knowledge sharing	.798	
M2. I outsourcing. I.e. purchasing, recruiting, technological support, consulting not used in our firm.	.768	
M3. I motivate innovative worker by adding salaries,	.232	
M4. I have provide support to innovate idea from the worker	.830	

4.2.2.2 Correlation Matrix of Items measuring Process Innovation

Process innovation was measured by five items (for more elaborate of the items see table 4.13 and Table 4-14 below indicates the correlation among items used to measure the variable process innovation. The items are significantly correlated and therefore lead to further step to determine factor analysis of the items. Factor analysis was determined to the component matrix, which tells whether the items measure the same thing by showing the number of components measured.

Table 4. 14: Correlation Matrix for Items Measuring Process Innovation

	Pr1	Pr2	Pr3	Pr4	Pr5
Process 1(Pr1)	1				
Process 2(Pr2)	.244**	1			
Process 3(Pr3)	.212 **	.186	1		
Process 4(Pr4)	.316 *	.154	.296 **	1	
Process 5(Pr5)	.935 **	.253 *	.175	.287 **	1

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

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

Source: Research Findings, (2019)

It is therefore important to note that our factor analysis (component matrix) shows that all the items measured the same thing by showing only one component and that all components have correlation above 0.7 with reliability of 0.769 and therefore all the items created a compound variable process innovation.

Table 4. 15: Factor Analysis for Items Measuring Process Innovation

Item	Component 1
Pr5. I have made improvement in the control of cost in production process	.965
Pr1. I have introduced novel /changes in techniques in production of furniture	.955
Pr3. I have improved value chain in the Physical Distribution Management (PDM) and recorded.	.835
Pr4. I have changes in manufacturing methods through introduction of new machinery	.786
Pr2. I have new modern equipments/tools that aid manufacturing	.767
Cronbach	.769

Source: Research Findings, (2019)

Four items were employed to measure management innovation's influence on the growth of wood and steel manufacturing firms, however item M3 was not include in the combined variable factor because the factor analysis showed to have factor loading less than 0.7 and therefore was omitted in the creation of compound variable despite the fact that correlation matrix showing some significance.

Table 4. 16: Correlation Matrix of Items Measuring Management Innovation

	Management 2	Management 3	Management 4	Management1
Management 2	1			
Management 3	.312**	1		
Management 4	.482 **	.447**	1	
Management1	.282 **	-.183	.333 **	1

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

Source: Research Findings, (2019)

For items measuring innovation, factor analysis was done to determine whether they measure the same thing. Component 1 as it is presented below, item M3 did not meet the general rule and therefore was not included in the summation of the variable.

Table 4. 17: Factor Analysis for Items Measuring Management Innovation

Item	Component
	1
M1. I have intranet, database training and practices to improve knowledge share.	.798
M2. I outsourcing. I.e. purchasing, recruiting, technological support, consulting not used in our firm.	.768
M3. I motivate innovative worker by adding salaries,	.232
M4. I have provide support to innovate idea from the worker	.830
Cronbach	.750

Source: Research Findings, (2019)

Dependent and independent variables were correlated to determine whether they were related, and the result showed that the variables were positively related. These results just show correlations among variables but however does not show influence between and among variables.

Table 4. 18: Correlations Matrix for Items in Dependant Variable (DV) and Independent Variable (IV)

	Asset Perf	Capital Perf	EmployPerf	Product Inn	Manage Inn	Process Inn
Asset Perf	1					
Capital Perf	.749**	1				
Employment Perf	.705**	.706**	1			
Product Inn	.531**	.564**	.333**	1		
Management Inn	.292**	.275**	.483**	.229*	1	
Process Inno	.281**	.278**	.448**	.131	.612**	1

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

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

Source: Research Findings, (2019)

4.4 Inferential Analysis

This section looks at the testing of the hypotheses and the sample of 91 respondents was used in the study. The model of the study used was as presented below, that

$$SME = \beta_0 + \beta_1(\text{Product Innov}) + \beta_2(\text{Process Inno}) + \beta_3(\text{Management Innov}) + \mu$$

But SME growth is measured by variables employment, total asset and total capital, therefore there were three more multiple regression models for each of the three variables because these variables are non additive. Therefore the models will be

$$Ep = \beta_0 + \beta_1(\text{Prodt Inno}) + \beta_2(\text{Proc Inno}) + \beta_3(\text{Magt Inno}) + \mu \dots \dots \dots (i)$$

$$C_p = \beta_0 + \beta_1(\text{Prodt Inno}) + \beta_2(\text{Proc Inno}) + \beta_3(\text{Magt Inno}) + \mu \dots \dots \dots (ii)$$

$$A_p = \beta_0 + \beta_1(\text{Prodt Inno}) + \beta_2(\text{Proc Inno}) + \beta_3(\text{Magt Inno}) + \mu \dots \dots \dots (iii)$$

4.4.1 Model of the Study

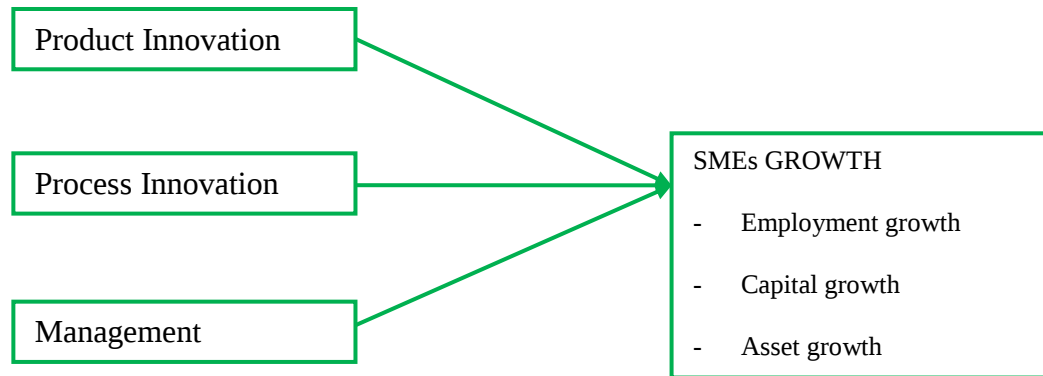


Figure 4. 4: Showing variables of the model of study

Source: Researcher constructs (2019)

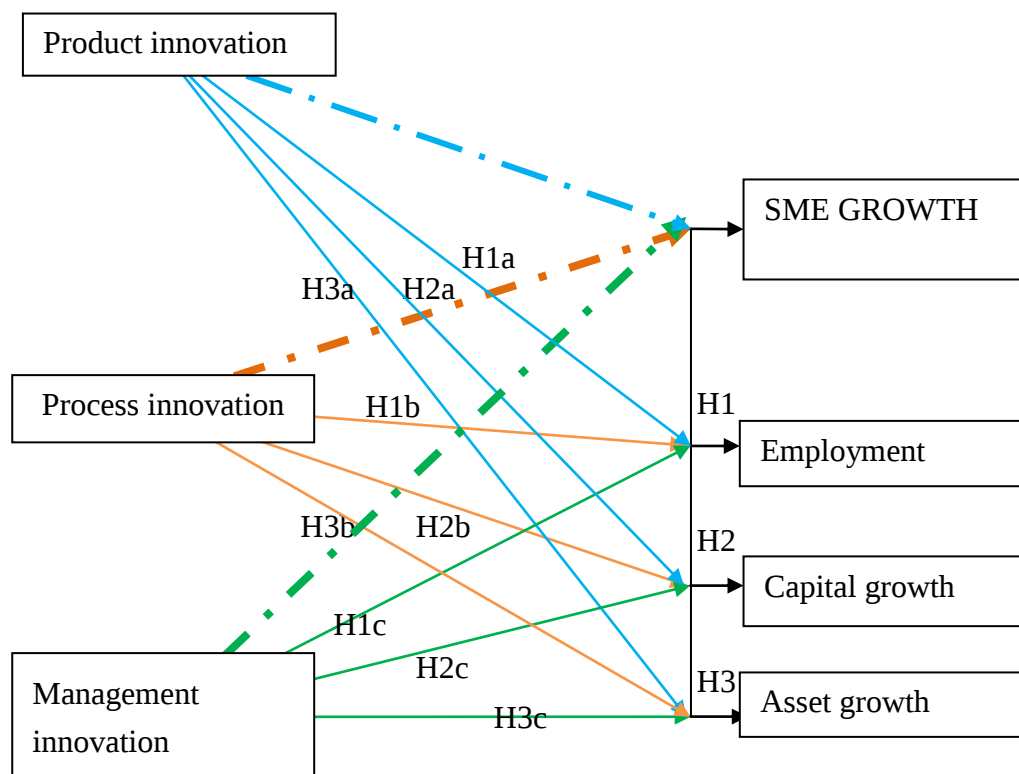


Figure 4. 5: Showing the Hypotheses Array constructs

Source: Researcher constructs (2019)

H1: Employment is positively influenced by innovation activities of the firm.

H1a: Employment growth is positively influenced by product innovation of the firm

H1b: Employment growth is positively influenced by process innovation of the firm

H1c: Employment growth is positively influenced by management innovation of the firm

$$\text{Employment (Eg)} = \beta_0 + \beta_1 \text{Prodinn} + \beta_2 \text{ProcInn} + \beta_3 \text{MgtInn} + \varepsilon$$

H2: Capital growth is positively influenced by innovation activities of the firm

H2a: Capital growth is positively influenced by product innovation by of the firm

H2b: Capital growth is positively influenced by process innovation by of the firm

H2c: Capital growth is positively influenced by management innovation by of the firm

$$\text{Model: Capital (Kg)} = \beta_0 + \beta_1 \text{Prodinn} + \beta_2 \text{ProcInn} + \beta_3 \text{MgtInn} + \varepsilon$$

H3: Asset growth are positively influenced by innovation activities of the firm

H3a: Assets growth are positively influenced by product innovation of the firm

H3b: Assets growth are positively influenced by process innovation of the firm

H3c: Assets growth are positively influenced by management innovation of the firm

$$\text{Assets (Ag)} = \beta_0 + \beta_1 \text{Prodinn} + \beta_2 \text{ProcInn} + \beta_3 \text{MgtInn} + \varepsilon$$

4.5 Employment Performance

4.5.1 Product Innovation and Employment Performance

This hypothesis intended to test the influence of innovation on employment performance in the study area in steel and wood furniture manufacturing subsector. The coefficient of determination $R^2 = 11.1\%$ which mean that the variable included in the model explains approximately 11.1% of the variations observed by the model. That is to say, the variations that occur in the explained variable “employment growth” accounts for 11.1% of the changes that happen in the product innovation of the firms in the industry. However, since the coefficient of determination is small, this show that the data were not close enough in the fitted regression model and the strength of the relationship between the model and the responses were weak.

Hypothesis H1: Innovation has a positive influence on the growth of Employment

H1a: Product Innovation has a positive influence on Employment growth

Table 4. 19: Model Summary Results of Product Innovation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.333 ^a	.111	.101	1.02361		
ANOVA ^a						
		Sum of Squares	df	Mean Square	F	Sig.
Regression		11.649	1	11.649	11.118	.001 ^b
Residual		93.252	89	1.048		
Total		104.901	90			
Coefficients of one variable linear regression						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	8.532	.485		17.581	.000
	Product Innovation	.090	.027	.333	3.334	.001

Source: Research Findings, (2019)

Despite observation showing that the data were not close enough to each other, the results were significant at 0.01 level of significant as the table below shows. These findings do suggest that there is a positive influence of innovation (product innovation) to the growth of employment. This may be due to the fact that in order to be innovative and creative to meet the changing and unpredictable demands of customers, firms require time to time to find employees with creativity and innovative mindset.

Model 1a: Employment Growth/Performance = 8.532 + 0.333ProdInn + ε

This model explains that to every 100% employment growth to the firm, product innovations contributes about 33.3% of those changes in the employment growth. See the table 4-20 of coefficient for further details. This is a huge contribution to the sector when one independent variable is tested against it dependent variable. The fact that the coefficient of product innovation (0.333) is positive, this implies that there is concurrence to the hypothesis that product innovation has a direct and positive influence to the growth of employment to manufacturing firms' especially wood and steel furniture. This means that changes in the innovation requirement say improvement will require more changes in the labour required (employment) for innovative people (intrapreneurs). These findings do suggest that there is a positive

influence of innovation (product innovation) to the growth of employment. This may be due to the fact that in order to be innovative and creative to meet the changing and unpredictable demands of customers, firms require time to time find employees with creativity and innovative mindset.

4.5.2 Process Innovation and Employment Performance

This hypothesis was intended to test the influence of process innovation on employment performance in the steel and wood furniture manufacturing subsector in the study area. The variations that occur in the explained variable employment growth are 20.1% of the changes that happen in the process innovation (the explanatory variable). However, since the coefficient of determination is not large enough, this shows that the data were not close enough in the fitted regression model and the strengths of the relationship between the model and the responses were little.

Hypothesis H1b: Process Innovation has a positive influence on the Employment growth

Table 4. 20: Model Summaries Results of Process Innovation

Model	R	R Square	Adjusted R Square		Std. Error of the Estimate	
1	.448 ^a	.201	.192		.97051	
ANOVA						
Model	Sum of Squares		df	Mean Square	F	Sig.
Regression	21.074		1	21.074	22.374	.000 ^b
Residual	83.827		89	.942		
Total	104.901		90			
Coefficients						
			Unstandardized		Standardized	
			Coefficients		Coefficients	
Model			B	Std. Error	Beta	t
1	(Constant)		7.179	.628		11.433
	Process Innovation		.187	.040	.448	4.730

Source: Research Findings, (2019)

However, the result shows that they are significant at the level of 10% (0.01) as shown in the table 4.19 above at ($p = .000$). This result probably suggests that process innovation is an important predictor of employment growth to many firms in the sector.

Findings revealed significant coefficient between process innovation and employment performance, this suggests that process innovation is an important

predictor of employment performance (growth), see the model 1b below. Notice that, the coefficient of 0.448 means that for every 100% changes that happen in the employment growth, about 44.8% of those changes were contributed by process innovation. The skilled people to operate the machines and create objects to bring about a meaningful shape that are wood or steel ornament in the furniture industry to attract customers.

Model 1b: $Employment\ Growth/Performance = 7.179 + 0.448ProcessInn + \varepsilon$

4.5.3 Management Innovation and Employment Performance

This hypothesis is the third one of the first hypothesis which tested the influence of management innovation has on employment performance. The result of this model is presented on the tables 4.20 below. The observed variation in the explained variable employment growth accounts for 23.3% of the changes that occur in the explanatory variable management innovation.

Hypothesis H1c: Management Innovation has a positive influence on Employment growth

Table 4. 21: Model Summary Results of Management Innovation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.483 ^a	.233	.224	.95082		
ANOVA						
Model	Sum of Squares		df	Mean Square	F	Sig.
Regression	24.440		1	24.440	27.033	.000 ^b
Residual	80.461		89	.904		
Total	104.901		90			
Coefficients of a variable						
			Unstandardized Coefficients		Standardized Coefficients	
Model			B	Std. Error	Beta	t Sig.
1	(Constant)		6.517	.698		9.334 .000
	Management Innovation		.267	.051	.483	5.199 .000

Source: Research Findings, (2019)

Findings were significant at a significance level of ($\alpha = 0.01$) and p- values of ($p = .000$). Signifying that management innovation had an influence to the growth of employment which indirectly influences the growth of the firms (SMEs). It can be noted from above table 4.20 that when other factors are kept constant, management innovation contributed 48.3% to all changes that happened to the growth of

employment. This can alternatively be stated as, to every 100% increase in employment in the firms, management innovation contributed 48.3% of those increase.

$$\text{Model 1c: Employment Growth/Performance} = 6.517 + 0.483\text{MgtInn} + \varepsilon$$

4.5.4 Innovation and Employment Growth

Combining the individual models provides the general model; we see that there was still connection of the contribution of the innovations (product innovations, process innovation and management innovation) to the growth of employment as a variable that is growth of SMEs in Dodoma city.

In the general model, the coefficient of determination (R^2) is 32.4% which implies that this is the percentage variation of all changes that happen in the explained variable (dependant) are explained by the explanatory variable (independent variable). The model is still significant ($p = .010, .017, \text{ and } .029$) respectively for product, management and process innovation. The model presented below represents the general model of how innovations influenced employment growth in wood and steel manufacturing firms in the area of study. The influence of innovation on employment performance, general regression model.

Table 4. 22: Model Summaries of the Results of Innovation and Employment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.569 ^a	.324	.300	.90296		
ANOVA ^a						
Model	Sum of Squares		df	Mean Square	F	Sig.
Regression	33.967		3	11.322	13.887	.000 ^b
Residual	70.934		87	.815		
Total	104.901		90			
Coefficients of explanatory variables						
Model	Unstandardized Coefficients		Standardized Coefficients			
	B	Std. Error	Beta	t	Sig.	
(Constant)	5.305	.752		7.054	.000	
Product Innovation	.064	.024	.237	2.621	.010	
Management Innovation	.153	.063	.277	2.439	.017	
Process Innovation	.104	.047	.248	2.224	.029	

Source: Research Findings, (2019)

In the this model (table 4-21 above), it can be seen that when all factors are compared at once on the way the contribute to the changes that happen in the dependant variable, the coefficient of determination is 32.4% and that the coefficient of independent variables in the model show that, every 100% changes in the employment growth that happened in the firms during operation period, product innovation contributed 23.7%, process innovation contributed 24.8% and management innovation contributed 27.7%.

$$\begin{aligned}\text{Employment Perfomance} &= \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \varepsilon \\ &= 5.305 + 0.237x_1 + 0.248x_2 + 0.277x_3 + \varepsilon\end{aligned}$$

Table 4. 23: Regression for Employment Growth (DV) Against Innovation (IV)

Model 1	Multiple Regression
<i>Employment Perfomance</i>	$= \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \varepsilon$ $= 5.305 + 0.237x_1 + 0.248x_2 + 0.277x_3 + \varepsilon$
Where in this case	X_1 = Product Innovation X_2 = Process innovation X_3 = Management Innovation β_1 = Coefficient of Product Innovation β_2 = Coefficient of Process innovation β_3 = Coefficient of Management Innovation
<i>Employment Perfomance(Ep)</i>	$Ep = 5.305 + 0.237ProdInn + 0.248Proclnn + 0.277MgtInn + \varepsilon$

Source: Research Findings, (2019)

4.6 Capital Performance

Hypothesis 2: Innovation has a positive influence on Capital performance/growth

The model tested the influence of innovation on capital performance of wood and steel furniture manufacturing firms. In this study, it was found that product; process and management innovation had an influence in all the changes that takes place in the firms about capital growth. Below we see how individual independent variable contributed to the growth of capital when other variables are kept constant.

4.6.1 Product Innovation and Capital Performance/ growth

H2a: Product innovation has positive influence on Capital growth of the firm

The coefficient of determination R^2 of the model compares the changes which take place in the capital growth of the firms with product innovation. It can be observed

that, all the changes in dependant variable capital that take place in the firms are explained by 31.8% of the changes that take place in the independent variable product innovation.

Table 4. 24: Model Summaries of Results of Product Innovation

Model	R	R Square	Adjusted R Square		Std. Error of the Estimate	
1	.564 ^a	.318	.311		.95454	
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
Regression		37.897	1	37.897	41.592	.000 ^b
Residual		81.092	89	.911		
Total		118.989	90			
Coefficient of Product Innovation						
			Unstandardized Coefficients		Standardized Coefficients	
Model			B	Std. Error	Beta	t
1	(Constant)		7.165	.453		15.832
	Product Innovation		.162	.025	.564	6.449

Source: Research Findings, (2019)

For that matter, when other factors (process and management innovation) are held constant, product innovation contributed about 56.4% towards the growth of capital of the firms. This may be due to the increasing demand of quality and innovated tools or machinery that are needed to add decorations of the furniture (products) to bring outlook of the furniture as per customer demands. Customer demands on various furniture order designs probably influenced the purchase of more capital machines and tool in the firms causing an increase in the capital tools and machines.

4.6.2 Process Innovation and Capital growth/Performance

H2b: Process innovation has a positive influence on Capital growth of the firm

Similarly, when other factors (product and process innovation) were kept constant and that process innovation is compared with the dependent variable capital, we see that 7.7% of all the changes that were recorded by the dependent variable capital were contributed by the process innovation. Process innovation caused little but significant ($p=.008$) changes in the growth of capital machines and tools in the furniture industry as it is seen the table of ANOVA below.

Table 4. 25: Model Summary of Process Innovation

Model	R	R Square	Adjusted R Square		Std. Error of the Estimate		
1	.278 ^a	.077	.067		1.11066		
ANOVA ^a							
Model		Sum of Squares	df	Mean Square	F	Sig.	
Regression		9.202	1	9.202	7.460	.008 ^b	
Residual		109.787	89	1.234			
Total		118.989	90				
Coefficient of Process Innovation							
			Unstandardized		Standardized		
			Coefficients		Coefficients		
Model			B	Std. Error	Beta	t	Sig.
1	(Constant)		8.074	.719		11.236	.000
	Process Innovation		.124	.045	.278	2.731	.008

$$\begin{aligned}\text{Capital Performance} &= \beta_0 + \beta_2 x_2 + \varepsilon \\ &= 8.024 + 0.278 \text{ProcessInno} + \varepsilon\end{aligned}$$

However, when other factors were kept constant, while measuring the contribution of process innovation to capital growth, it was seen that to every 100% changes that takes in the growth of capital of the firms, 27.8% of all the changes were contributed by process innovation. This means probably that, like in product innovation, products' quality depended more on the processes that the product passed before it is completed ready for use. This process involves drawing, cutting, curving, smoothening and polishing and painting of elegant colours for the furniture to look splendour to attract customers to buy the product

4.6.3 Management Innovation and Capital growth/Performance

H2c: Management innovation has a positive influence on Capital growth of the firm

Management innovation is all about how managers of the different furniture manufacturing firms discover new ways or improve the existing ways in organising, planning, leading, coordinating, or motivating intrapreneurs in such a way that the management is envied by the competitors. Management innovation is all about innovativeness of the management as it is contrasted to innovation management. In this case the coefficient of determination that explains all the changes that happens in the explained variable capital performance is 7.6% are explained by the explanatory variable management innovation. Though this percentage show that the data were not

closely related, but they show that result were statistically significant ($p = .008$) at a significant level of ($\alpha = 0.01$).

Table 4. 26: Model Summary of Management Innovation

Model	R	R Square	Adjusted R Square		Std. Error of the Estimate		
1	.275 ^a	.076			.065		
ANOVA ^a							
Model	Sum of Squares		df	Mean Square	F	Sig.	
Regression	9.009		1	9.009	7.290	.008 ^b	
Residual	109.980		89	1.236			
Total	118.989		90				
Coefficients of management Innovation							
			Unstandardized		Standardized		
			Coefficients		Coefficients		
Model			B	Std. Error	Beta	t	Sig.
1	(Constant)		7.830	.816		9.592	.000
	Management Innovation		.162	.060	.275	2.700	.008

Source: Research Findings, (2019)

Management innovation had when other factors are controlled, it was found that t for any changes that occurred in the capital growth, and management innovation contributed about 27.5% of the total capital of the firms. Therefore it is important that managers of small firms understand the importance of their position to the performance of the capital as they contribute innovativeness that happen in the business organization. The support that they provide to intrapreneurs financially, materially, and allowing workers and employees to explore their creativity and innovative may result in the growth of the firms as capital grows.

4.6.4 Innovation and Capital Performance.

When all factors are included in the model, that is product innovation, process innovation and management innovation, results show that the coefficient of determination is 36.2% which represents all the changes that happen in the dependant variable capital growth are explained by the explanatory variables. If we take a look at the combined effect of independent variables on the dependent variable, it can be seen that, every 100% changes or increase in capital growth that take place in the firm, product innovation contributed by 53.1%, management innovation contributed by 4.2% while process innovation contributed 18.3%. This information provides that, product innovation has more influence to the growth of capital than the rest of the factors, followed by process innovation by far. In this regard, wood and steel

furniture manufacturing industry show that they have not paid much attention to the management innovation and therefore it is not well known to them the contribution of management innovativeness to the growth of the firm.

Table 4. 27: General Model Summary of Innovation and Capital Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.602 ^a	.362	.340	.93417		
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.067	3	14.356	16.450	.000 ^b
	Residual	75.922	87	.873		
	Total	118.989	90			
Coefficients of Innovation						
			Unstandardized Coefficients	Standardized Coefficients		
Model			B	Std. Error	Beta	t
1	(Constant)		5.728	.778		7.363
	Product Innovation		.152	.025	.531	6.033
	Management Innovation		.025	.065	.042	.380
	Process Innovation		.081	.048	.183	1.690

Source: Research Findings, (2019)

Table 4. 28: Regression Results for Asset Growth

Model 2	Multiple Regression
Capital performance	$= \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \varepsilon$
	$= 5.728 + 0.531x_1 + 0.183x_2 + 0.042x_3 + \varepsilon$
Where	$X_1 = \text{Product Innovation}$
	$X_2 = \text{Process innovation}$
	$X_3 = \text{Management Innovation}$
	$\beta_1 = \text{Coefficient of Product Innovation}$
	$\beta_2 = \text{Coefficient of Process innovation}$
	$\beta_3 = \text{Coefficient of Management Innovation}$
Capital growth (Kg)	$= 5.728 + 0.531\text{ProdInn} + 0.183\text{ProcInn} + 0.042\text{MgtInn} + \varepsilon$

Source: Research Findings, (2019)

4.7 Asset Performance/Growth

H3: Innovation has positive influenced on Asset performance of the form.

The study intended to test the influence of innovation of the performance of asset of wood and steel manufacturing firms in Dodoma city, with three models hypothesizes of individual variables with respect to the dependent variable.

4.7.1 Product Innovation and Asset Growth/performance

H3a: Product Innovation has positive Influence on Assets growth of the firm.

After running simple regression of product innovation as an explanatory variable and asset as an explained variable, results showed that all the changes that happened in the growth of assets in the wood and steel manufacturing firms were caused by product innovation and is evidenced by the coefficient of determination of 28.2%. The coefficient is significant ($p=.000$) which support the hypothesis H3a above. The contribution of product innovation on the growth of assets in the wood and steel furniture manufacturing subsector is therefore 53.1% for any 100% growth in the asset by the firms as seen in table 4-28 below.

Table 4. 29: Model Summary of Product Innovation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.531 ^a	.282	.274	1.030470		
ANOVA						
Model	Sum of Squares		df	Mean Square	F	Sig.
Regression	37.098		1	37.098	34.937	.000 ^b
Residual	94.506		89	1.062		
Total	131.604		90			
Coefficients of Product Innovation						
			Unstandardized Coefficients		Standardized Coefficients	
Model			B	Std. Error	Beta	t
1	(Constant)		7.404	.489		15.155
	Product Innovation		.160	.027	.531	5.911

Source: Research Findings, (2019)

$$\text{Assets (Ag)} = \beta_0 + \beta_1 \text{Prodinn} + \varepsilon \dots\dots\dots (i)$$

$$\text{Assets (Ag)} = 7.404 + 0.531 \text{ProductInn} + \varepsilon$$

The coefficient product innovation is positive; this shows that product innovation has a positive influence to the growth of assets of firms in the wood and steel furniture subsector. Increased innovative activities in the industry would cause more changes

in the increase of assets and hence growth of the small and medium enterprises (SMEs) in the region.

4.7.2 Process Innovation and Asset Growth

The stated hypothesis had to test whether product innovation has positive influence on the growth of assets on wood and steel furniture manufacturing firms.

H3b: Process innovation has a positive influence on Assets growth

Simple regression analysis was run and the results were statistically significant such that ($p = .007$) at significant level of ($\alpha = .01$). The coefficient of determination was as low as $R^2 = 7.9\%$ meaning that data were not close to each other and it represent the changes that take place in the firm's asset growth were contributed by the changes in innovative activities that were taking place in process innovation and that it contributed to about 28.1% for any 100% of the growth changes that happens in the assets growth.

Table 4. 30: Model Summary of Process Innovation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate			
1	.281 ^a	.079	.069	1.166995			
ANOVA ^a							
Model	Sum of Squares		df	Mean Square	F	Sig.	
Regression	10.397		1	10.397	7.635	.007 ^b	
Residual	121.207		89	1.362			
Total	131.604		90				
Coefficients ^a							
			Unstandardized	Standardized			
			Coefficients	Coefficients			
Model			B	Std. Error	Beta	t	Sig.
1	(Constant)		8.161	.755		10.809	.000
	Process Innovation		.132	.048	.281	2.763	.007

Source: Research Findings, (2019)

$$\text{Assets (Ag)} = \beta_0 + \beta_2 \text{ProcInn} + \varepsilon \dots\dots\dots \text{(ii)}$$

$$\text{Assets (Ag)} = 8.161 + 0.281 \text{ProcInn} + \varepsilon$$

From the above simple linear regression model, the coefficient of product innovation is positive which implies that there were a positive influence between asset growth and the process innovation activities undertaken by the furniture subsector.

4.7.3 Management Innovation and Asset growth/Performance

The hypothesis testing was done by running simple regression analysis between management innovation as an explanatory variable and the asset as an explained variable.

H3c: Management innovation of the firm has a positive influence on Assets growth.

Results of this test were statistically significant ($p = .005$) and the coefficient of determination was 8.5% and the contribution of management innovation to the asset performance (growth) was 29.2% for every 100% of the increase in assets in the firms. This is a great contribution to the growth of the SMEs as indirectly contributed by the growth of asset, see table 4.31 below for more information.

Table 4. 31: Model Summary Management Innovation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.292 ^a	.085	.075	1.163035		
ANOVA^a						
Model	Sum of Squares		df	Mean Square	F	Sig.
Regression	11.218		1	11.218	8.294	.005 ^b
Residual	120.386		89	1.353		
Total	131.604		90			
Coefficients of Management Innovation						
			Unstandardized Coefficients		Standardized Coefficients	
Model			B	Std. Error	Beta	t
(Constant)			7.786	.854		9.117
Management Innovation			.181	.063	.292	2.880

Source: Research Findings, (2019)

$$\text{Assets (A)} = \beta_0 + \beta_3 \text{MgtInn} + \varepsilon \dots \dots \dots \text{(iii)}$$

$$\text{Assets (A)} = \beta_0 + 29.2 \text{MgtInn} + \varepsilon$$

The coefficient of management innovation is also positive towards the assets of the wood and steel manufacturing firms. This means that increase in management innovation would result in an increase in the number of assets of the firms in the industry. Therefore, innovative activities that the management supported in the firms had an impact to the growth of assets. In the firms, employees need to be motivated and given time to present their creative and innovative ideas in an attempt to improve

the products. When this attempt is supported by the management financially or by providing material so that intrapreneurs would use them to create a new product, this would cause an increase in the number of valuable assets that the firm's owned.

4.7.4 Innovation and Asset Performance.

To test the hypothesis that innovation has a positive influence on asset performance of the firms, a multiple regression analysis was run and the results showed that product innovation statistically significant and therefore had an influence on the asset growth ($p = .000$) and therefore process innovation and management innovation were statistically insignificant at ($p = .127$ and $p = .507$) respectively. Despite the fact that the coefficient is positive, the contribution or influence of the management innovation was so little in the growth of asset. This means that management innovations in the area of study were not developed and therefore shows that managers of the firms had no education on it. This can be supported by demographic information that many of the owners of the enterprises (51.6%) had only standard seven and therefore leading low knowledge on managerial functions in their firms (see table 4.3). When management was tested alone while other factor were kept constant, management innovations showed to be statistically significant ($p = .005$) and contributing about 29.2% in every 100% changes that take place in asset growth. However, we see that when the multiple regressions is run to test the contribution of each factor in the model, it can be seen that management innovation had insignificant contribution or influence on the changes that leads to the growth of assets of firms in the study area.

Table 4. 32: Regression Summary of Asset Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.575 ^a	.331	.308	1.006126

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	43.535	3	14.512	14.336	.000 ^b
Residual	88.069	87	1.012		
Total	131.604	90			

Coefficients of Innovation

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
(Constant)	5.737	.838			6.847	.000
Product Innovation	.148	.027	.491		5.454	.000
Management Innovation	.047	.070	.075		.666	.507
Process Innovation	.080	.052	.171		1.540	.127

Source: Research Findings, (2019)

$$\text{Assets (A)} = \beta_0 + \beta_1 \text{Prodinn} + \beta_2 \text{ProcInn} + \beta_3 \text{MgtInn} + \varepsilon \dots\dots\dots (\text{iv})$$

$$\text{Assets (A)} = 5.737 + 0.49.1 \text{Prodinn} + 0.171 \text{ProcInn} + 0.075 \text{MgtInn} + \varepsilon$$

Table 4. 33: Regression Results of Asset Performance

Model 1	Multiple Regression
<i>Asset Performance</i>	$= \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon$ $= 5.737 + 0.491x_1 + 0.171x_2 + 0.075x_3 + \varepsilon$
Where in this case	$X_1 = \text{Product Innovation}$ $X_2 = \text{Process innovation}$ $X_3 = \text{Management Innovation}$ $\beta_1 = \text{Coefficient of Product Innovation}$ $\beta_2 = \text{Coefficient of Process innovation}$ $\beta_3 = \text{Coefficient of Management Innovation}$

Source: Research Findings, (2019)

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 Introduction

This chapter discusses the findings presented in chapter four (4). We have the information about demographic and how they influence the growth of SMEs (firms) in the wood and steel subsector. Discussions on the influence of product, process and management innovation on employment growth, capital growth and asset growth and hence the growth of SMEs and then the discussion on the repercussion of the theories of innovations in Tanzanian context.

The objective of this study was to assess the influence of innovations on the growth of small and medium enterprises (SMEs). The study confined itself on product innovation, process innovation and management innovation as they may have an influence in the growth of SMEs majoring in employment growth, capital growth and asset growth. In this study, three research objectives were studied

- i) The influence of product innovation on the growth of wood and steel furniture manufacturing SMEs in Dodoma city.
- ii) The influence of process innovation on the growth of wood and steel furniture manufacturing SMEs in Dodoma city
- iii) The influence of management innovation on the growth of wood and steel furniture manufacturing SMEs in Dodoma city

From the above three objective, there resulted nine (9) research hypotheses, each objective three hypothesis. In this these nine hypotheses, the influence of management innovation on the growth of asset is reject as it showed statistically insignificant and the rest were fully accepted.

5.2 Demographic characteristics

This part provides characteristic features of the respondents used in this study. This includes age, sex, marital status and the level of education of the respondents. This information is useful as it helps in the comparing and linking with other information to determine whether there was any associations among the data collected and

analysed to bring meaningful information that could help in explaining the association that may exist between them. This part will cover information related to gender (sex), marital status, education, age of respondent and age of the firms and general firm characteristics.

5.2.1 Gender of Respondents

In this study, a sample of 91 steel and wood furniture entrepreneurs were used. Out of 91 respondents, 98.9% (n=90) were men and only 1.1% (1) of the respondent was a woman. This woman however, did not participate in the total process of marking furniture but firm owner. This information tells us that, the wood and steel furniture manufacturing subsector is a male dominant, and that women were not encouraged to engage in the subsector, this may be due to cultural factor (Isaga, 2012b) or gender role of the society as it is shown in the table below. The masculinity nature of the job probably contributes to these phenomena that only men were engaged in this manufacturing subsector (see table 4-1) where 90(98.9%) of all participants (owners) visited by the research in the study were men.

5.2.2 Marital Status of Respondents

In this study, where 91 owners of firms were visited, it was observed that wood and steel furniture-manufacturing subsector, majority of the respondents engaged in the business were married. About 94.5 % (n= 86) had been married and only 5.5 % (n= 5) were single. This may be due to the fact married men had more responsibility than singles. Some of these responsibilities may be to make sure that food was presented at the table at the end of the day to feed the children and wives and moreover to be able to meet other errands such as school fees, medical services for children and strive to get out of poverty and responding to the call of establishing Tanzania of industry by engaging in the production of furniture in the wood and steel manufacturing industry (See table 4-2) for further information on the percentages of married and singles in the study area. Owners with families have more financial commitments; provide sense of purpose and the credibility at the work place. So this may be one of the reason married men are more engaging in the sector than single men.

5.2.3 Education Level of Respondents

The education of respondents shows that 51.6 % (n= 47) had only completed primary education, 24.2% (n=22) of respondents had primary education and at least with training from VETA, 15.4% (n=14) had completed a secondary education and were able to attend some training before they were engaged in the woods and steel manufacturing subsector. Only 1.1% (1) respondent had reached a diploma level and engaged in the industry. It is an important sector for the growth of the country's economy yet its majority practitioners had only primary education. This may have an impact on the management innovation of their firms, suppressing new ideas that may seem costly or ineffective in the face. There had little done in the management innovation to improve the physical distribution management and the reduction of costs through registering firms to authorities where only 29.7% (118) wood and furniture manufacturing firms were registered in total and 70.3% (279) were not registered to the respective authority. Due to their inadequate education, many firm owners do not find the importance of formalizing their business and they continue to operate in the state where they are not loan able by the financial institutions that could help in the growth of the business through increase capital. Previous studies noted that the amount of formal education that an entrepreneur has, had an influence or was a greater determinant to the growth of SMEs (Under et al 2009a) as cited by (Isaga, 2012a). However, some of these entrepreneurs had little formal education and training but had previous education attained through experience for other firms where he was recruited before starting his own business. Therefore this seems that, the management of the business was mainly experiential from the past business firms where he worked before, this is in agreement with (Isaga, 2012a) which showed "positive and significant relationship between managerial experience and the growth of SMEs in terms of sales and assets" also these findings agrees that some of the business organization in Tanzania are run with people with only primary education (LEMA, 2013).

5.2.4 Age of Respondents

Out of 91 respondents involved in the woods and steel furniture-manufacturing subsector study, 63.8% (n=58) were youths. This may probably mean that youth have

found refuge in the wood and steel furniture-manufacturing subsector. This may also mean that more efforts may be directed to this category of youth by financing and equipping youth with capital and knowledge on how to manage their businesses. Approximately 36.2% (33) respondents were of middle age, where some of youth who had been incubated by this group had graduated and therefore left to start their own business firms. The large number of youth engaging in this field may be related to the number of owners with primary education explained section 5.2.3; this means that because many of the owners had primary education, this is enough reason to tell that many owners finished their standard seven and were incubated for two or three years and when they acquired some necessary skills they left their employer and went to start their own business.

Many of the firms were younger, in answering the question for the key respondents; *What other factors that you think have influenced the growth of SMEs apart from product innovation, process innovation and management innovation?* One key respondent answered by saying,

“...many of the firms are growing horizontally, many of the new business’s owners were our employees and trainees, they worked with us and when they achieved their goal and skills to start their own firms, they left to start their own business. That is why you see owners very young and their firms are also young...”

This was awesome as he considered the mushrooming of the wood and steel firms in the sturdy areas as growth in horizontal sense which was created by some kind of incubation by older firms. Many of these firms were young and their owners were also young and it can be compared with the descriptive results of age of the respondents and age of the firms chart (Fig 1 and fig 2) in Chapter four, where the ages of the owners of the firms and the ages of the firms were skewed to the left.

5.2.5 Age of a Firm

Many of the wood and steel subsector-manufacturing firms that were involved in the study were young. This can be proven by looking at the mean age of the firms. In this study the mean age of the firms were 7.5years, this shows that there is some kind of relationship with the age of the firm owners who were involved in the study. The shape of the histogram chart below which is skewed to the left can support the

assertion that in the area of study there was a growing trend by youth to establish new firms in the wood and steel furniture-manufacturing subsector as it was stated by the key respondent in the above section. The horizontal growth of this subsector businesses is probably more rapid than the vertical growth (growth of sales, capital, assets, employment, and other measures for growth). It is expected that Small and young business may bring about good number of high growth, and that these small firms are believed to be responsible for the volumes of new job creation, technological development, and economic expansion though in marginal (Ionica, 2013). This implies that small business do not invest more on innovations but rather make improvements of the existing products that larger firms have already made innovations or adoptions of the existing technologies. However, it can be therefore agreed that since there are many new firms in the study area, there are the leading in innovations in the wood and steel furniture subsector. These findings are in agreement with recent studies which relate age of the firm and firm performance, such that small firms accumulates assets quicker than larger firm(rate of accumulation of assets) (Coad, Holm, Krafft, & Quatraro, 2018). Some of these studies found that there is a mixed finding of whether firm age has an influence in the performance of the firms. Those who proposed that firm age have positive influence of firm performance, their arguments is based on the fact that older firms performance lies in accumulated experience, knowledge a, supply channels, well-known customers relations, easier access to competitive resources, improved human capital and lesser financing costs (Pervan, Pervan, & Ćurak, 2017). This may be true since even in this study many of the smaller/younger firms, its owners were gloomed and trained in older firms that had accumulated experience, abilities and skills for some time hence superior performance. However, those who argue that smaller firms are more performing than older firms, their argument lie in the premise that older firms are bureaucratic and lenient and inflexible to changes, rigid rules and procedures that are likely to bring an obstacles for managerial changes and innovation which are important in the modern competitive business environment (Pervan et al., 2017). Moreover, some studies compared the firms life cycle in the production that as “capital increased over time, its marginal product declined, therefore decreasing the firm’s rate of growth” (Loderer & Waelchli, 2010). This

concept favours smaller firms with ambitions to grow and utilise resources available for competitive growth, increasing one unit of input resulting to greater outputs. This implies that younger firms in the wood and steel furniture manufacturing subsector have more agility to grow than older firms due to this phenomena of declining in growth due age.

This goes in line with the Schumpeterian theory of innovation that account younger firms being more innovative than older firms however depending on the type of innovation like incremental innovation which helps to change features of the product from that of the previous (product innovations) as it was described by Schumpeter in his “creative destructive” innovation in his book (Śledzik, 2013).

5.2.6 Firm Characteristics

It was observed that firm in the study area, 22% (n = 20) were micro firms as they had employed people between 2 to 4 (n = 91) of the total respondents and the rest of the firms were small 78 % (n=71) as the table shows, had employed between 5 and 15 employees (see table 4-4) for more information. The characteristic of these firms were sole proprietorship and were young firms between the age firm of 1 and 5 years and therefore basing on the number of employees they had on their firms, all these SMEs are in the category of small scale enterprises. This smallness may be a stumbling block to capital growth (social, financial, human and competitive resources) this may be due to the reason that by being small, they may not be loan able and unfriendly to financial institutions.

*“roadside sellers and marching guys (machinga) are given identity cards and therefore being recognized by the authorities and are given priority and areas to operate their business, but we carpenters, no one is looking and considering us, we are chased here and there every day, even here we are operating illegal as you see, we are on the **trench** of water”*

He continued telling the researcher while showing him the ditch of water

“ we are working above this ditch, when the official come they chess us out and they do not give us an alternative areas to do our business and if they do, they tell us go to remote areas where customers may not be able to see our products and we are unable to rent a store in the city for showroom, who can lend us money?”

He complained to the researcher.

Complaints from the carpenters may reveal that they are not trusted by money lenders since they do not have specific areas of business operation (office), today they are here and tomorrow they are at another location. In US, there is a decline in small business lending (SBL) which has caused hot debate on the role of community banks in providing credit to US small business (Jagtiani & Lemieux, 2016), this report says that small business has turned to big banks for their business funding. In Tanzania, micro-finances are shunning from lending small business like furniture carpentry because they do not have specific working premises.

5.2.7 Additional Information

As we have already seen that all the firms involved in the study were Sole proprietors. They were owned by individuals who employed their fellow family members, or people other youth who wanted to earn a living. However, it ended up that these firms became a recruiting or incubation firms. This is due to the reason that many of the youth who were employed in the firms worked for few years before they left to start their own business ventures and when they had acquired necessary skills to work independently. It can be seen that 59.3% of the firms had less than 7.5 years mean age of the firms, 17.6% (16) of the firms had just 3 years of establishment (see table 4 – 5) for more information. Many of the owners of these small firms were employees of those firms with at least 7 Yrs of operation and above and went to open their own. It was some kind of brain drain that happens in the carpentry industry.

5.3 Employment Growth

In studying the influence of innovation on the growth of SMEs, we had three hypotheses to be tested against the growth of SMEs.

H1: Employment is positively influenced by innovation activities of the firm.

5.3.1 Product innovation and Employment growth

This study tested the hypothesis that employment growth is positively influenced by product innovation of the firm. We look at the performance (growth) of employment of the firms as a component of the variable that measures the growth of firms (SMEs) as stated in H1a and the finding from this study were as follows.

The coefficient of determination $R^2 = 11.1\%$ which mean that the variable product innovation explains approximately 11.1% of the variations observed by the model. That is to say, the changes that occur in the explained variable “employment growth” accounts for 11.1% of the changes that happen product innovation activities of the firms in the industry. However, since the coefficient of determination is small, this show that the data were not close enough in the fitted regression model and the strength of the relationship between the model and the responses were weak.

H1a: Product Innovation has a positive influence on Employment growth

Despite observation showing that the data were not close enough to each other, the results were significant at ($\alpha=0.01$) level of significance and the data were statistically significant with p-values ($p = .001$). These findings do suggest that product innovation plays an important role in the growth of SMEs through employment performance. These results are in agreement with previous studies that contend that product innovation is a focal source of competitive advantage to the firms due to quality enhanced which subsequently contributes to growth (Rosli & Sidek, 2013). This may be due to the fact that in order to be innovative and creative to meet the changing and unpredictable demands of customers, firms require time to time to find employees with creativity and innovative mindset. If we look at the simple linear regression model below, we see that, first, there is a positive coefficient of the product innovation, which imply that product innovation has a positive influence to employment performance and the value of this coefficient in magnitude is 0.333.

Model 1a: Employment Growth/Performance = 8.532 + 0.333ProdInn + ε

According to this model, to every 100% employment growth to the firm, product innovations contributes about 33.3% of those changes in the employment growth (See the table 4-18) of coefficient for further details. This is a huge contribution to the sector when one independent variable is tested against it dependent variable, other factors being controlled. This implies that there is concurrence to the hypothesis that product innovation has a positive influence to the growth of employment to manufacturing firms’ especially wood and steel furniture and

therefore we accept the alternative hypothesis. This means that changes in the innovation requirement say improvement will require more changes in the labour required (employment) for innovative people (intrapreneurs) as product innovation show to have a positive influence to employment growth and hence firm growth (Karabulut, 2015a). This may be due to the fact that in order to be innovative and creative to meet the changing and unpredictable demands of customers, firms require time to time to find employees with creativity and innovative mindset. Another study by (Ionica, 2013) state that innovation will bring more working places, and new discoveries will results into new entrepreneurial adventures, which means that innovations will results into more business and thereby increasing employment opportunities.

5.3.2 Process Innovation and Employment Performance

We test hypothesis H1b which states that process innovation has a positive influence on employment performance (growth) in the study area in the steal and wood furniture manufacturing subsector. Finding in this investigation tells us that, variations that occur in the explained variable employment growth are 20.1% of the changes that happen in the process innovation (the explanatory variable). Alternatively, process innovation explain ($R^2 = 20.1\%$) of the changes that happen in the employment performance.

Hypothesis H1b: Process Innovation has a positive influence on the Employment growth

The finding shows that at a significant level of 10% (0.01) results are statistically significant (as shown in the table 4-19) in chapter four with p-values ($p = .000$). This result probably suggests that process innovation is an important predictor of employment growth to many firms in the sector. Findings also revealed significant coefficient between process innovation and employment performance, this suggest that process innovation is an important predictor of employment performance (growth), see the model 1b below. Notice that, the coefficient of 0.448 means that for every 100% changes that happen in the employment growth, about 44.8% of those changes were contributed by process innovation, whereas product and management innovation are controlled (constant) as we have already explained it in chapter four.

It needs skilled people to operate the machines and create objects to bring about a meaningful shape of wood or steel house ornament in the furniture industry to attract customers.

Model 1b: Employment Growth/Performance = 7.179 + 0.448ProcessInn + ε

So here we find full support of the hypothesis that innovation has appositive influence on the growth of employment. Other studies also support this finding as it says that process innovation has positive impact on employment performance. It contend that "innovation will increase the productivity of labor and capital, as well as bring mo, employment and improve the labor conditions" (Ionica, 2013). Process innovation will increase employment at a rate of 44.8% in the firms only under the condition that of other factors are constant, but when other factors are included, the impact is reduce to almost half of this rate. This finding is partially supported by another study done in Chile on technological innovation and employment and the findings were that there was no evidence to suggest that process innovation significantly affected employment growth after controlling for investment and sectoral pattern (H & Lauterbach, 2006).

5.3.3 Management Innovation and Employment Performance

We test another hypothesis; this is the third one of the first hypothesis (see H1c) below. The result of this model is presented on the tables 4-20. The management innovation explain about $R^2 = 23.3$ of employment performance. This means that, observed variation in the explained variable employment growth is accounted for 23.3% of the changes that occur in the explanatory variable management innovation.

Hypothesis H1c: Management Innovation has a positive influence on the growth of Employment

Results were statistically significant at a significance level of ($\alpha = 0.01$) and p- values of ($p = .000$). Signifying that management innovation had ana influence to the growth of employment which indirectly influences the growth of the firms (SMEs). It can be noted from table 4-20 that when other factors are kept constant, management innovation contributed 48.3% to all changes that happen to employment growth. This

can alternatively be stated as, to every 100% increase in employment in the firms, management innovation contributed 48.3% of those increase.

Model 1c: Employment Growth/Performance = 6.517 + 0.483MgtInn + ε

Management innovation had an enormous contribution to the performance of growth of employment of the firms when other factors were held constant at 48.3% rate of change in employment. The study on effects of Innovation Types on Performance of Manufacturing firms in Turkey revealed that management innovation had a positive impact on SMEs performance (Karabulut, 2015a; Mol & Birkinshaw, 2009) as it has been stated in the literature review. The ability of the management to conceive new innovative ideas will cause a change in the pattern of the employment position in the manufacturing firms. This implies that management will consider more innovative worker as they will bring innovative product that will eventually catch up the demand of customers. It is in the opinion of the researcher that all firms' works to meet customers' demand, and when customers demand are not sought prior to production of any product, then it is likely that the firm's prosperity is at the edge of collapse. By producing looking the customers demand, the firm is solving the challenge of the customer and therefore the challenge of the customer is an opportunity for the entrepreneur.

5.3.4 Innovation and Employment Growth

We test the main hypothesis H_1 stated below, looking at the effect of all the combining factors on the explained variable, employment growth. When all the factors are test on the model, the magnitude of the coefficients of explanatory variables are a little bit small as compared to when we tested one variable controlling the other. However, the good thing is that they are still positive and statistically significant.

H1: Innovation has a positive influence on Employment growth of the firm.

In the model, the coefficient of determination $R^2 = 32.4$ which implies that, innovation types explain 32.4% of employment growth. This is the percentage variation of all changes that happen in the explained variable (dependant) are explained by the explanatory variable (independent variable). The model is still

significant ($p = .010, .017, \text{ and } .029$) respectively for product, management and process innovation (see table 4 -21). The model presented below represents the general model of how innovations influenced employment growth in wood and steel manufacturing firms in the area of study.

In this model, we see that when all independent variables are tested to determine their influence on the dependent variable *ago*, their coefficients have become small as compared when each variable was tested alone to see its contribution to the dependent variable. However, the coefficient of determination has been increased to 32.4 which imply innovations explains much of the changes in the employment growth as compared to the way single explanatory variables would.

The coefficient of independent variables in the model show that, every 100% changes in the employment growth that happened in the firms during operating period, product innovation contributed 23.7%, process innovation contributed 24.8% and management innovation contributed 27.7% of the employment changes that took place in the firms (see table 4-21). The coefficients of the independent variables are positive, these support the hypothesis that, innovation has positive influence to employment growth and therefore we accept the alternative hypothesis. In this study, it can be seen that product innovation has almost less but positive influence to employment as process innovation, these findings may be differing to what (Meriküll, 2008) found in his study, where at firm - industry level it was found that innovation activity had a positive and statistically significant effect on employment. The study also revealed that product and process innovation had stronger positive result on employment than process innovation. This means that process innovation somewhat in developing world tends to displace employment opportunities than product innovation as it requires more skilled people (Meriküll, 2008), however, a study in Chile found that there is no evidence to support such claims (Benavente & Lauterbach, 2008; H & Lauterbach, 2006).

5.4 Capital Performance/Growth

We tested the influence of innovation on capital performance of wood and steel furniture manufacturing firms. In the study, it was found that product; process and management innovation had an influence in all the changes that takes place in the firms about capital growth. Below we see how individual independent variable contributed to the growth of capital when other variables are kept constant.

H2a: Capital growth is positively influenced by product innovation by of the firm

5.4.1 Product Innovation and Capital growth/Performance

In testing product innovation on the model, it was found that, product innovation explained about determination 31.8% of all the variation in the capital growth in the firms ($R^2 = .318$). The model test the whether there is a positive influence between product innovation (explanatory variable) and the explained variable capital. We look at the coefficient of product innovation to see whether it is positive or not, and if we see that the coefficient of the explanatory variable is positive then we are sure that the hypothesis is supported otherwise we reject the hypothesis. After testing the hypothesis, it was found that, the coefficient of explained variable product innovation is positively related to capital growth with a magnitude of 0.564, which means that, product innovation contribute about 56.4% of every 100% of the changes in the capital increase or growth of firms in the study area and since the relationship is positive, then we accept the alternative hypothesis, that product innovation has a positive influence to capital growth. Where these findings statistically significant? We see that the findings were statistically significant with p –values ($p = .000$) at a level of significant ($\alpha = .01$), see table 4.23 for more information.

For that matter, when other factors (process and management innovation) are held constant, product innovation contributed about 56.4% towards the growth of capital of the firms. This may be due to the increasing demand of quality and innovated tools or machinery that are needed to add decorations of the furniture (products) to bring outlook of the furniture as per customer demands. Customer demands on various furniture order designs probably influenced the purchase of more capital machines and tool in the firms causing an increase in the capital tools and machines.

These findings are supported by another study done in Spain on product innovation and relational capital, where it was found that product innovation had a positive relationship with the capital of the firm (Dorrego, Costa, & Fernández, 2013) and (Mashimba & Kühl, 2014) as it was explained in chapter two of literature review and that enterprise performance is highly supported by entrepreneurship innovations in the product (Ndemezo & Kayitana, 2017). Therefore, product innovation has greater importance to the success of manufacturing firms of all nature and that if the firm fails to innovate in this dynamic world of taste where every day customers want new product or modified one, then the firm that does not innovate its technology will be pushed to the edge of competition.

$$\text{Capital growth (Kg)} = 7.165 + 0.564\text{ProdInn} + \epsilon$$

5.4.2 Process Innovation and Capital growth/Performance

We tested whether process innovation has a positive influence on capital growth while holding other variables constant and, results were such that process innovation explains 7.7% of all the changes that were recorded by the dependent variable capital. This shows that the variation in the dependant variable capital ($R^2 = 0.077$) are little but the total results are statistically significant with p-values ($p = .008$) at a level of significant ($\alpha = 0.01$). The growth of capital machines and tools in the furniture industry as it is seen in the table of ANOVA (see table 4-24). If we take a look on the sign of the coefficient of process innovation as it is related to capital performance, we see that 0.278 is positive. However, when other factors were held constant, while measuring the contribution of process innovation to capital growth, it was seen that to every 100% changes that takes in the growth of capital of the firms, 27.8% of all the changes were contributed by process innovation. This is an indication that process innovation has a positive influence to capital performance (growth) thereby supporting our assertion. In this case we accept the hypothesis that process innovation has positive influence to capital performance.

This finding is supported by another study that firms carry out process innovation in order to improve or to have new products and that firms employ innovation activities in order to improve financially (Ndemezo & Kayitana, 2017). (Rammer,

2016) analysed panel data from German measuring the outputs of process innovation in manufacturing firms and it was found that process innovation' prime output is cost reduction⁴¹ and therefore has an indirect relationship to capital growth, Ar, I. M. and Baki, B.(2011) confirmed that there was a positive and significant influence of product and process Innovation on firm performance, another study asserts that innovation plays a mediating role and has a positive and significant association between capital and Micro and Small Business' performance (Agyapong, Agyapong, Poku, & Davis, 2017) and in manufacturing industry, process innovation or new technology is positively related to firm growth/performance (Rosli & Sidek, 2013) This means that innovation such as open innovation may have greater impact to social capital as it facilitates relationship between innovators and therefore improving the capital of the firms socially. There is no doubt that there are different sources of innovative ideas some of which are pertaining to the ability to socialize with innovative firms, products from other firms, critical thinking, and customers feedback. Building and maintaining such an important innovation mindset will continuously add socializing people which is eventually a capital.

H2b: Capital growth is positively influenced by process innovation by of the firm

5.4.3 Management Innovation and Capital growth/Performance

Management innovation is all about how managers of the different furniture manufacturing firms discover new ways or improve the existing ways in organising, planning, leading, coordinating, or motivating intrapreneurs in such a way that the management is envied by the competitors. Management innovation is all about innovativeness of the management styles as it is contrasted to innovation management. In this study we determine whether management innovation had positive influence on the capital performance. We test while holding other factors constant and the coefficient of determination of the model was $R^2 = 0.076$, which means that management innovation explains about 7.6% of all the changes or variations in the dependent variable. Though this percentage shows that the data were

⁴¹ <https://www.hackerearth.com/blog/innovation-management/what-is-process-innovation/cited> on 10/9/2018

not closely fitted to the model, result show that the data were statistically significant ($p = .008$) at a significant level of ($\alpha = 0.01$).

It was found also that for any 100% capital growth that took place in the firms, management innovation contributed about 27.5% of the total capital of the firms. Most important to note is that the coefficient of management is positive (see table 4 - 26) and therefore is in support of the hypothesis that management innovation has appositive influence to capital growth and therefore we accept the hypothesis. In that case, managers of small firms should understand the importance of their position to the performance of the capital as they contribute innovativeness that happens in the business organization. The support that they provide to intrapreneurs financially, materially, and allowing workers and employees to explore their creativity and innovative and motivation may result in the growth of the firms as capital (Hamel, 2006) as it was explained in review of literature. Mol, Michael J and Birkinshaw, Julian (2009) also found that management innovation is positively linked with firm performance in the form of successive growth in productivity⁴² and has an influence in intellectual capital as well as knowledge based capital (OECD / OCDE, 2013) and relational capital (Mention, 2011).

H2c: Capital growth is positively influenced by management innovation by of the firm

5.4.4 Innovation and Capital Performance.

When all factors are included in the model, that is product innovation, process innovation and management innovation, results show that the coefficient of determination is 36.2% which presents all the changes that happen in the dependant variable capital growth is explained by the explanatory variables. If we take a look at the combined effect of independent variables on the dependent variable, it can be seen that every 100% changes or increase in capital growth that take place in the firm, product innovation contributed by 53.1% and statistically this contribution was significant with p value ($p=.000$), management innovation had little positive but and insignificant contribution to the growth of capital, as it contributed only 4.2%. It is

⁴² <https://www.sciencedirect.com/science/article/abs/pii/S0148296309000125> cited on 16/5/2019

clear that the influence of management innovation in general term in the growth of capital in area of study was statistically insignificant with p-values ($p = .705$), implying that management innovation in the wood and steel furniture manufacturing subsector is not improved and therefore has little impact on the general growth of capital (see table 4-26) for details. If we look at the hypothesis H_{2C} , we see that there is an insignificance influence between management innovation and capital growth and therefore we reject partially the alternative hypothesis. This also means that management innovation has been given less importance in manufacturing sector, these results are supported by (Sapprasert, 2008) that organization innovation has been given a lesser amount of attention than other technological side of innovation.

Process innovation contributed 18.3% in the growth of capital is statistically significant with p values ($p = .095$) and therefore we accept the hypothesis. This information provided tells us that product innovation has greater impact in firm growth than process and management innovation specifically in the study area. This information provides that, product innovation has more influence to the growth of capital than the rest of the factors, followed by process innovation by far. In this regard, wood and steel furniture manufacturing industry show that they have not paid much attention to the management innovation and therefore it is not well known to them the contribution of management innovativeness to the growth of the firm. In support of this finding, (Rosli & Sidek, 2013) argued that innovation has appositive influence on intellectual capital of a firm and firm growth but talked nothing of financial growth of which these SMEs were concerned about. Innovation had generally had been of greater importance in the growth of a firm through increasing different forms of capital starting for financial, human, intellectual and social capital which increases the performance of the firm.

5.5 Asset Performance/Growth

To test the hypothesis that of innovation has a positive influence on performance of asset of wood and steel manufacturing firms in Dodoma city, we tested individual variables through SLR in three model hypothesizes of explanatory variables with respect to the dependent variable. Each, product, process and management

innovation were tested independently to determine the impact they provide to assets as a dependent variable.

5.5.1 Product Innovation and Asset Growth

H3a: Product Innovation has positive Influence on Assets growth of the firm.

After running SLR of product innovation as an explanatory variable and asset as an explained variable, the coefficient of determination $R^2 = 0.282$ which imply that product innovation explain about 28.2% of all the changes in the asset growth of wood and steel furniture manufacturing firms. The coefficient of product innovation in this model is positive and as high as 0.531, this figure represents the percentage that for every 100% increase in asset growth of the firms in the industry, production innovation contributed 53.1% of those increase. It is also important to note other results from this analysis that the data were statistically significant with ($p=.000$) at a significant level of ($\alpha =0.01$). These results are in support of the hypothesis **H3a** above and therefore we accept the alternative hypothesis (see table 4-28) for more details.

The fact that the coefficient of product innovation is positive; this shows its influence to the growth of assets of firms in the wood and steel furniture subsector. Increased innovative activities in the industry would cause more changes in the increase of assets and hence growth of the small and medium enterprises (SMEs) in the region. These findings supported by (Kumar & Li, 2012) who in their study on innovative capacity and asset growth anomaly, they found that there was no asset growth anomaly for high Innovative Capacity (IC) firms and fast asset growth in these firms was significantly positively related to future surplus income and that IC plays a vital role in the dynamics between asset growth and stock returns.

5.5.2 Process Innovation and Asset Growth

The stated hypothesis had to be tested whether process innovation had positive influence on the growth of assets on wood and steel furniture manufacturing firms. SLR was run and the following were the results of the analysis.

H3b: Assets growth are positively influenced by process innovation of the firm

Simple linear regression analysis (SLRA) was run and the results were statistically significant with ($p = .007$) at significant level of ($\alpha = .01$). The coefficient of determination was as low as $R^2 = 7.9\%$, in this model, process innovation explains 7.9% of all the variations in asset growth or performance in the firms. This variation may be insignificant but hitherto process innovation contributed in real values to about 28.1% for every 100% asset growth in the manufacturing firms in the study area. Therefore process innovation still plays an important role in the growth of assets and consequently SMEs growth. This is because process innovation reduces the cost of production giving rise to growth of profitability or current assets.

From the above simple linear regression model, the coefficient of product innovation is positive which implies that there was a positive influence of process innovation activities on asset growth by furniture subsector. To be able to undergo process innovation, machinery in assets and other durable tools are need, out of which they give rise to an increase in asset at the end of financial year or business year. Karabulut, (2015) found that while process innovation reduce cost of production and improves price to customers, firms will simultaneously be adding asset in machinery, delivery vans and buying more land and building more stores. This will eventually increase total asset that the firm owns

5.5.3 Management Innovation and Asset Growth

Management innovation involves scientific management, TQM and learning organization. It is therefore important to note that improvement in management innovation will improve the quality of management, adoption of scientific approaches to management and that the organization would be acquiring new knowledge and skills related to management innovation. To be able to test the hypothesis, *H3c* below, we run SLRA between management innovation as an explanatory variable and the asset as an explained variable and the output of the analysis are explained below.

H3c: Management innovation has positive influence on Assets growth.

Results of this test were statistically significant ($p = .005$) and management innovation explained 8.5% of all the variation in the explained variable asset growth and the contribution of management innovation to the asset performance (growth) was 29.2% for every 100% of the increase in assets in the firms. This is a great contribution to the growth of asset, which indirectly contributes to the growth of SMEs (see table 4- 30). It is in the view of the researcher that management innovation may contribute to acquisition of other assets like the intangible assets (goodwill, organization values and norms, culture) which are brought about by the firm's management ability to change in behaviour and thinking towards innovativeness in their regular practices. This view is supported by Sapprasert, (2008) who argues that organizational innovation is difficult to measure given that it is intangible in nature. In line with the RBV, to gain competitive capabilities that are not imitable, management must be ready to learn and adapt new values and norms that are inimitable and therefore becomes an intangible asset to the firms. Growing and adapting to innovative mindset by the management would be a helpful to building new a competitive firm. According to the theory of innovation advocated by Schumpeter, employees with innovative spirit (intrapreneurs) are likely to be a greater capital to the firm if the management learning part of innovation is improved (Ng, Ahmad, Chan Wei, & Hairul Rizad Md, 2017), it was also found that organizational innovation adds performance by dropping administrative and transaction costs, improving workplace satisfaction and hence labor productivity is increased, gaining access to non-tradable assets such as rules and procedures (Ng et al., 2017).

In general, we see that the coefficient of management innovation is positive towards the assets of wood and steel manufacturing firms. This finding is supported by (Mol & Birkinshaw, 2009) who found that management innovation had a positive connection with firm performance in terms of productivity. This means that an increase in management innovation would result in an increase in the number of assets of the firms in the industry. Therefore, innovative activities that management supported in the firms had an impact to the growth of assets. In the firms, employees

need to be motivated and given time to present their creative and innovative ideas in an attempt to improve the products. When this attempt is supported by the management financially or by providing material so that intrapreneurs would use them to create a new product, this would cause an increase in the number of valuable assets that the firm's owned.

5.5.4 Influence of Innovation on Asset Performance.

H3: Innovation of the firm has positive influenced Asset growth

To test the hypothesis that innovation has a positive influence on asset performance of the firms, a multiple regression analysis was run and the results showed that product innovation statistically significant and therefore had an influence on the asset growth ($p = .000$) and therefore and process innovation was statistically significant at ($p = .127$) and the management innovation showed statistically insignificant at ($p = .507$). Despite the fact that the coefficient is positive, but the contribution or influence of the management innovation was so little in the growth of asset. This means that management innovations in the area of study were not developed and therefore have no education on it. This can be supported by demographic information that many of the owners of the enterprises (51.6%) had only standard seven and therefore leading low knowledge on managerial functions in their firms (see table 4-3). When management was tested alone while other factor were kept constant, management innovations showed to be statistically significant ($p = .005$) and contributing about 29.2% (table 4-30) in every 100% changes that take place in asset growth. However, we see that when the multiple regressions is run to test the contribution of each factor in the model, it can be seen that management innovation had insignificant contribution or influence on the changes that leads to the growth of assets of firms in the study area while process innovation showing a partial influence. However, the general model was statistically significant with p-values ($p = .000$), for detailed information see ANOVA (table 4-31). In this general model, it is observed hat product innovation has a contribution of 49.1% for every 100% changes in the asset growth of the firms in the industry. This gives us information that, product innovation contributes more to the growth of firms' asset that other type of innovation used in this study.

5.5 Innovation and SMEs growth

In this study we have found that innovation activities that are carried out by the firms have positive influence to the growth of SMEs. These finding are supported by many studies done in Asia where it was reported that innovativeness often associated with SMEs growth Carland et al, 1984; Barber, Metcalfe and Porteous 1989; Utsch and Rauch 2000 as cited in (Isaga, 2012). It was also noted that many employees left firms with 7year and above to start their own business. This is shown by the large number of firms with firm age less than 7yrs, meaning that large firms acted like incubator for your innovators who after gaining sufficient skills went to start their own business. And this was also supported by other scholars in which Isaga cited such events form Koh,1996 that innovative student showed more interest to start their own business more over innovative was seen as a predictor to start a new business. This can now be concluded that innovation is linked to growth of SMEs and propensity to start new own business ventures. Other studies that are in favour of the influence of innovation to SMEs growth are (Ngugi et al., 2013) who found that innovation had innovation had an impact on the growth of SMEs, others were (Ionica, 2013) and (Martin & Namusonge, 2014) as it was earlier elaborated in the review of literature.

$$SMEs(g) = \beta_o + \beta_1 Innovations(Product, Process, Management) + \varepsilon$$

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.0 Introduction

This chapter presents key conclusions derived for the findings presented in this study and their implication or repercussions. The arrangement of this section is in the following order; first summary of the key findings, second is conclusions and third is recommendation and lastly the implication of the theories of innovation and the general practices in Tanzanian context. This study aimed at assessing the influence of innovation on SMEs growth, wood and steel furniture manufacturing firms as a case. The main objective of the study was to assess the influence of innovation on the growth of SMEs, majoring in wood and steel furniture manufacturing firms.

6.1 Summary of Key Findings

Innovation types influences significantly the performance of manufacturing firms. In this study, we have seen that all explanatory variables; product, process and management innovations were tested against dependent variables; employment growth, capital growth and asset growth as measures of SMEs growth and they produced statistically significant results, portraying that innovation in the current edge of competition in the market to make sure that they capture the attention of customers, customer based innovations are inevitable for the success of SMEs.

6.1.1 Innovation and Employment

The hypothesis innovation has a positive influence on employment performance, was tested and MRA results showed that management innovation had more contribution to employment performance of the wood and steel manufacturing firms than product and process innovation. The learning organization, quality management and scientific management as being component of management innovation are important in the decision of what employees to hire of what skills. In this observation it was also seen that process and product innovation contributed almost equal to the employment performance of the firms. However, when SLRA was run for individual

variables, management innovation also showed to influence more employment performance followed by process and product innovation contributed less to employment performance.

6.1.2 Innovation and Capital

Innovation variables were regressed against capital and the results showed that product innovation in all circumstances SLRA and MLRA had greater and positive influences to capital growth followed by process and lastly management innovation. This information may tell us something, that innovations are expensive and management find it expensive to give out resources to intrapreneurs in order to make innovations or motivate them by giving support to materials or to buy new machinery equipments that could facilitate their innovative activities in the firm. In the model, we see that management innovation contributed only 4.2% to capital growth while 53.1% for product and 18.3% for process innovation. This gives an alarm that management support is needed in making conducive environment for worker who devote their time and skills in the business organization to make invention or innovative ideas for the growth of the firm.

6.1.3 Innovation and Assets

In the testing of the hypothesis H3, that innovation has positive influence on asset growth; results showed that data were statistically significant. It was found that in both SLRA and MLRA, product innovation influenced more assets growth followed by management growth and lastly by process innovation. However, process innovation showed to have insignificant influence to asset growth as it contributed only 7.5% to every 100% growth in asset in the wood and steel manufacturing industry.

6.2 Implication of the Study

This study provides numerous contributions to the theory and the practical part in the area of innovation and creativity where wood and steel furniture subsector takes part in the manufacturing industry. This contribution is in the light of theoretical and physical implication (inferences) where we see that many firms were able to use new

material for furniture which are environmentally friendly, the MDF as far as Schumpeter is concerned.

6.2.1 Theoretical Implication

This study makes numerous theoretical inferences. Starting with innovation, we see that innovation play a considerable role to the growth of SMEs. Through innovations many products and management styles have been improved in manufacturing firms to encourage customers to buy their product and trying to catch-up with the growing dynamic market that seeks improved product with low cost that were made possible through process innovation (Karabulut, 2015a).

However, it is important to note firms cannot carryout innovations be it radical or incremental to their product, process or management without having precious resources. It is in the focus of this study that firms with little or no competitive resources such as culture to be innovative, human resources (intrapreneurs), and financial resources, physical resources such as building and store or warehouses (Pesic et al., 2013). To realise the potential of its strategic resources, firms should put in order it's valuable, rare, inimitable and organised resources (Mweru & Muya, 2016). To make this innovation valuable and inimitable, it needs somewhat be protected by law, the property rights be in place. Drucker, (1993) and Grant, (1996) as cited in (Mention, 2011) noted that intangible resources and capabilities, which are also known as intellectual capital, are consensually agreed as one of the most vital source of value creation and competitive advantage.

6.2.2 Practical Implication

The finding of this study comes with several observations to be made. In the field, it was noted that most of the innovations that were made of open innovation and were not from desktop kind of innovation. Despite the fact that, this kind of open innovation has made wood and steel furniture manufacturing industry grow; no one can claim the benefit of the innovation as his own. Few owned rare imitable resource such as financial and machinery resource but not cultural aspect to innovation which the entire respondent involved in the study agreed to have being doing innovation often. Photos of innovated furniture would go through different carpentry firms

through WhatsApp on their mobile phones without the legal permission or notice of the innovator. This shows that innovation in the area of furniture may not be protected or it is difficult to protect since it is more of an open innovation.

Moreover, since most of the firm owners showed to have no permanent area to operate their business, government would locate them in an area where they could be recognized and therefore would be able to support soft loan providers are able to support with loans.

Another area is management innovation, government and other small business stakeholders would play in the provision of managerial skills that would cater from management innovation to financial management where they could be able to manage resources (such as employees) well. In this study, it can be seen that many employees left job and went to start their own business endeavour. This is shown by the good number of firms having an age of 7 years and below.

6.3 Conclusions

Wood and steel furniture manufacturing subsector is important for the growth economy like any other small and medium enterprises in the country. The growth of this sector depends highly in the ability of intrapreneurs' innovative ability and support they receive from the management of the firm.

Innovative mentality and behavior is one of the inimitable competitive resources that cannot be copied by the competitor. Creating such a working environment for the employees would promote more innovations and innovative ideas may be nurtured and therefore SMEs could grow rampantly in the area of employment. Many employees would find valued and honored and share the ownership and success of the firms.

We also saw that innovation has significant influence in the growth of capital of firms. Innovations provide opportunity for much equipment and machinery to be purchased that could increase the speed of innovation in its ultimate result. Improving product quality, and reduction of cost and PDM in which the firm is in operation such as transporting the purchased furniture to the customers home to make sure that the furniture are received in good order as part of the insurance.

Moreover, in this study we saw that innovation has an influence in the asset growth. Increasing in making product innovation could cause more assets in the firms as compared to process or management innovations. This means that innovation has to be customer based innovation, otherwise the product produced may not find customers to buy, and therefore a waste of scarce resource that could be used to produce other customer demanded products and earn sales. Firms make innovation based on the needs of the market or the current trending fashions in the market and produce quality products that equate or supersede the market of furniture products from Chinese. We see that use of new materials in the making of furniture are in place, where we saw MDF are used in the making of table sets, chairs, grill doors, sofas, cupboards and wardrobe

6.3 Policy Implication

The findings promote the use of innovative mindset that is customer based innovation. This means that nay innovation that is to be applied in the production of goods or services must consider the market demand before it is presented for product. It must aim at reduced economic or social cost of getting services or goods. It is therefore expected that, the small and medium enterprise policy of Tanzania that fosters the Small business development promote the use of resources and recycling of material to be used in the place of timber and motivate industries in Tanzania to install industries that would recycle wood byproducts to generate local MDF and other material for furniture use.

Provide seminars and workshops to entrepreneurs that would increase the capabilities and innovative skills in the area of innovation and resources so that Tanzanians would prefer the local made product over the imported from China and other countries.

6.4 Recommendations

We have learned that innovation is linked to starting new personal business and impacts significantly the growth of small and medium enterprises. In context of this knowledge, there should be:-

- i) Business incubators where students and young entrepreneurs will be housed for some known period of time to learn and work in large innovative companies to instill innovative skills and spirits.
- ii) Policies that nurture skills and protect inventions radical innovation be established and given mandate to protect their invention. Intellectual property rights are emphasized to the innovator in manufacturing sector to register for their innovations and inventions.
- iii) Micro finance institutions that lend capital to SMEs pursuing innovation and inventive business in manufacturing to buy machinery and tools so as to enable SMEs become market demand innovators.
- iv) Policies that would promote the use of new materials (MDF) in the wood and steel furniture manufacturing subsector and eventually make those materials cheap by taxing low to importation or introduce industries that produce MDF within the country. This could lower the use of traditional timber and hence environmental protection friendly.
- v) More studies that involve more samples than the one used in this study. This may improve the results.

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APPENDICES:

Questionnaires

Respondents Questionnaire

My name is **Stephen John**, a student of Mzumbe University of Morogoro pursuing Masters of Science in Entrepreneurship Development. I am asking for your valuable time and support through this questionnaire in the collection of data for my research so that I may accomplish my studies. The research entitled **Assessment on Influence of Innovation on Small and Medium Enterprise (SME) Growth, A Case of Wood and Steel Furniture Manufacturing in Dodoma City**. Below is the list of sets of questions that are entirely for academic purpose for you to respond to. Your answers to this question will be of greater importance to the achievement of this research as well as accomplishing my studies at Mzumbe University.

A. Identification

Questionnaire number

Date of interview Date.....Month ofYear.....

WardVillage
.....Street.....

Contact number

.....

B. Respondents Characteristics

1. What is your age?.....
2. SEX: Male(M) Female(F).....
3. Marital status : Fill the letter of the right option in the box.
 - a) Single
 - b) Married
 - c) Separated
 - d) Divorced
 - e) Widow/widower

Education level attained

4. Has [name] ever been to school? If No skip Qn 5
1: YES 2: NO
5. If the answer in question 5 is Yes, what level of education did you attain?
[01] = Primary.
[02] = Primary + Course
[03] = Secondary
[04] = Secondary + Course
[05] = Ordinary Diploma
[06] = University

C. INFLUENCE OF PRODUCT INNOVATION ON SME GROWTH

- 1) How old t is the firm?.....years
- 2) Does your firm innovate its product?
1: Yes 2: No
- 3) If the answer in question 1) above is Yes, how frequently do you innovate your product?
1. Never
2. Seldom
3. Some times
4. Often
5. Always
- 4) If the answer in question 1) is No, Explain why
.....
.....
.....
.....
.....
- 5) How many employees/workers does the firm have currently?
.....

Rate firm's performance due to innovation about the following in your firm.

1 = Decreased, 2 = Remained the same/constant, 3 = Increased

ITEM	1= Decreased	2= Remained the same	3= Increased
Employees	1	3	3
1) Employees			
2) Motivation			
3) Employee Turn up			
4) Intrapreneurs			
Capital	1	2	3
1) Availability of loans			
2) Availability of grants			
3) Availability of mentor/social capital			
4) Availability of new ideas			
Assets	1	2	2
1) Availability of land and working area.			
2) Availability of material (steel/mdf/wood)			
3) Availability of quality and modern machinery			
4) Goodwill			

6) Rate the status of employees skills in your firm

1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly /Agree

ITEM	1= SD	2= D	3= N	4= A	5= SA
✓ I have diversity of employee in our firm.	1	2	3	4	5
✓ I have specialised employees who perform special tasks					
✓ I have new employees /workers trained to take task in the new future.					

7) Rate the following about Product Innovation in your firm

1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly Agree

ITEM	1= SD	2= D	3= N	4= A	5= SA
1) I have introduced of new model /improved products manufactured in the firm	1	2	3	4	5
2) I have quality product innovated and manufactured in the market					
3) I have manufactured products from new raw materials					
4) I have new receive new product ideas from customers and accommodate to our firm					
5) I have high-tech tools and equipment used for product manufactured by firm					

PROCESS INNOVATION ON SME GROWTH

8) How do you rate the following about process innovation in your firm?

1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly Agree

ITEM	1= SD	2= D	3= N	4= AG	5= SA
1) I have introduced novel /changes in techniques in production of furniture	1	2	3	4	5
2) I have new modern equipments/tools that aid manufacturing					
3) I have improved value chain in the Physical Distribution Management (PDM) and recorded.					
4) I have changes in manufacturing methods through introduction of new machinery					
5) I have made improvement in the control of cost in production process					

MANAGEMENT INNOVATION ON SME GROWTH

- 9) How do you rate the following about management innovation in your firm?

1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly Agree

ITEM	1= SD	2= D	3= N	4= AG	5= SA
1) I have intranet, database training and practices to improve knowledge share.	1	2	3	4	5
2) I outsourcing. I.e. purchasing, recruiting, technological support, consulting not used in our firm.					
3) I motivate innovative worker by adding salaries,					
4) I have provide support to innovate idea from the worker					

THIS IS THE END OF THE QUESTIONNAIRE

Thank you a lot for your time and cooperation you have shown to me.

QUESTIONNAIRE FOR KEY INFORMANTS

My name is Stephen John, a student of Mzumbe University of Morogoro pursuing Masters of Science in Entrepreneurship Development. I am asking for your valuable time and support through this questionnaire in the collection of data for my research so that I may accomplish my studies. The research entitled **Assessment on Influence of Innovation on Small and Medium Enterprise (SME) Growth, A Case of Wood and Steel Furniture Manufacturing in Dodoma City**. Below is the list of sets of questions that are entirely for academic purpose for you to respond to. Your answers to this question will be of greater importance to the achievement of this research as well as accomplishing my studies at Mzumbe University.

These questions will be used to clarify any information provided by respondents

1. List the things showing that process innovation has influenced SME growth.
 - i.
 - ii.
 - iii.
 - iv.

Indicator/checklist: Presence of the following

- ❖ Presence of new simplified technological process of how to make furniture.
- ❖ Existence of new equipment
- ❖ Use of soft ware to design product
- ❖ Presence of new products
- ❖ Presence of modified product

1. What are the new equipments that the firms have installed or purchased for improving process innovation of furniture?
 - i.
 - ii.
 - iii.
 - iv.

2. What management functional practices of SMEs have been innovated?

- i.
- ii.
- iii.
- iv.
- v.
- vi.

Indicators.

- a. New ways of planning
 - b. New ways of organizing
 - c. Improved ways of directing
 - d. New ways of Leading
 - e. New ways of staffing
 - f. New ways of co-coordinating and monitoring
 - g. Motivational to workers improved e.g. Support workers innovative ideas.
3. What other factors that you think have influenced the growth of SMEs (wood and steel manufacturing sector) apart from product innovation, process innovation and management innovation?
- i.
 - ii.
 - iii.
 - iv.
4. What do you think the government should do to influence the growth of wood and steel furniture manufacturing SMEs?
- i.
 - ii.
 - iii.
 - iv.

THIS IS THE END OF THE QUESTIONNAIRE

Thank you a lot for your time and cooperation you have shown to me.