

**THE INFLUENCE OF EDUCATION ON ENTREPRENEURSHIP IN
MALAWI**

MASTER OF ARTS (ECONOMICS) THESIS

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UNIVERSITY OF MALAWI

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MASTER OF ARTS (ECONOMICS) THESIS

By

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University of Malawi

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DECLARATION

I, the undersigned, hereby declare that this thesis is my own original work, and it has never been submitted for similar purposes to this or any other university or institution of higher learning. Where other people's work has been used, acknowledgements have been made. All errors contained herein are the author's sole responsibility.

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Full Legal Name

Signature

Date

CERTIFICATE OF APPROVAL

The undersigned certify that this thesis represents the student's own work and effort and make acknowledgements where other sources of information have been used. The thesis is submitted with our approval.

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DEDICATION

I dedicate this work to the Almighty God for immensely blessing me, my beloved late father and mum and my siblings who inspired and supported me to reach this far.

May the souls of my late father, Pattern, mother, Rose and brother, Cosmas rest in eternal peace.

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ABSTRACT

Entrepreneurship is an important contributor to economic growth and development of any country. It is multifaceted as it cuts across a broad range of disciplines such as economics, health, agriculture, engineering, and energy. Entrepreneurship impact on job creation especially in rural areas, poverty reduction, tax generation for the government, food security and nutrition, innovation and technological advancements. Most developed countries have a strong entrepreneurship ecosystem to support the birth and growth of enterprises. This study analysed the influence of education on entrepreneurship in Malawi and the results of the study are aimed at informing and enhancing the entrepreneurship ecosystem for promoting enterprise development and growth in Malawi. Due to limited resources, the study used already existing data from the Fourth Integrated Household Survey (IHS4) from the National Statistical Office. Further data analysis from the Third Integrated Household Survey (IHS3) was done to validate the results from IHS4. A Two-Part Econometric Model was used to analyse the data. Multicollinearity Test was carried out to ensure that there was no inter relation between independent variables while the Link Test was used to ensure that there were no additional independent variables that were not included in the model. Modified Park Test was conducted to identify the appropriate family for the Generalized Linear Models (GLM). The results of the study showed that education positively affects entrepreneurship and that the probability to engage in entrepreneurial activity decreased with age. However, the amount spent on entrepreneurial activities was much higher for older people, above 65. The results also indicated that region or location influenced one to engage in entrepreneurial activities though it did not influence the amount of investment made in the business and being a Muslim was observed to be statistically significant compared to being non. In conclusion, investment in the educational sector should be increased to enable more Malawians to pursue higher education and become serial entrepreneurs. Entrepreneurship should be introduced to the youth earlier as the likelihood to venture into entrepreneurship decreases with age and that a conducive environment similar to the urban areas should be created in rural areas to stimulate entrepreneurship.

TABLE OF CONTENTS

ABSTRACT.....	vi
LIST OF FIGURES	ix
LIST OF TABLES	x
LIST OF ABBREVIATIONS AND ACRONYMS	xi
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background	1
1.2 Problem Statement and Justification of the study.....	3
1.3 Relevance of the Study	5
1.4 Study Objectives	6
1.4.1 Main objective	6
1.4.2 Other objectives	6
1.4.3 Hypothesis Testing.....	6
1.5 Organisation of the study	6
CHAPTER TWO	7
PROFILE OF ENTREPRENEURSHIP IN MALAWI	7
2.1 Introduction.....	7
2.2 Entrepreneurship in Malawi.....	7
2.2.1 Malawi Government's Policies and Plans	7
2.2.2 Education versus Entrepreneurship.....	10
2.2.3 Entrepreneurship by Age	12
2.2.4 Nonagricultural enterprises	12
2.2.5 Institutional framework to promote entrepreneurship (MSMEs)	13
CHAPTER THREE	18
LITERATURE REVIEW	18
3.1 Introduction.....	18
3.2 Theoretical Literature.....	18
3.2.1 List of definitions.....	22
3.2.2 Entrepreneurship Development Theories	24
3.2.3 Education	27
3.2.4 Empirical Literature	29
CHAPTER FOUR.....	35
METHODOLOGY	35
4.1 Introduction.....	35
4.2 Data	35
4.2.1 Data Analysis	35

4.2.2 Econometric Model Specifications	35
4.2.3 Diagnostic Tests.....	40
CHAPTER FIVE	42
RESULTS AND DISCUSSIONS.....	42
5.1 Introduction.....	42
5.2 Descriptive Statistics.....	42
5.2.1 Entrepreneurship and Sex of Household Head	42
5.2.2 Entrepreneurship and Education of Household Head	43
5.2.3 Entrepreneurship and Region, Residence and Business Registration for Household	44
5.2.4 Entrepreneurship and Capital Source.....	45
5.2.5 Entrepreneurship and Age Category	46
5.3 Econometric Results	46
5.3.1 Diagnostic Tests.....	47
5.3.2 Econometric Results	48
5.3.3 Interpretation.....	52
CHAPTER SIX.....	55
CONCLUSIONS AND POLICY IMPLICATIONS	55
6.1 Summary of the study	55
6.2 Key findings and Conclusions	55
6.3 Policy Implications	56
6.4 Study Limitations and Areas for Further Research.....	57
REFERENCES	58
APPENDICES	62

LIST OF FIGURES

Figure 1: Levels of education and MSMEs owners	11
Figure 2: Classification of non- agriculture enterprises by sector	13
Figure 3: Entrepreneurship Development Model	25
Figure 4: Entrepreneurship and Capital Source	45

LIST OF TABLES

Table 1: Evolution of Entrepreneurship through Various Schools of Thought	20
Table 2: Entrepreneurship and Education.....	43
Table 3: Entrepreneurship by Region and Residence of Household	44
Table 4: Ownership of Entrepreneurship by Age	46
Table 5: Link Test for Model Specification.....	48
Table 6: Econometric Results	49

LIST OF ABBREVIATIONS AND ACRONYMS

AfDB	African Development Bank
DEMAT	Development of Malawian Enterprises Trust
DRC	Democratic Republic of Congo
EDF	Export Development Fund
EU	European Union
GLM	Generalized Linear Model
GEM	Global Entrepreneurship Monitor
ICT	Information and Communication Technology
IGA	Income Generating Activities
IHS3	Third Integrated Household Survey
IHS4	Fourth Integrated Household Survey
ILO	International Labour Organisation
JCE	Junior Certificate of Education
JfYA	Jobs for Young People in Africa
MAIIC	Malawi Agricultural and Industrial Investment Corporation
MARDEF	Malawi Rural Development Fund
MBS	Malawi Bureau of Standards
MCCCI	Malawi Confederation of Chamber of Commerce and Industry
MDGS	Malawi Growth and Development Strategy
MEDF	Malawi Enterprise Development Fund
MEDI	Malawi Entrepreneurship Development Institute
MK	Malawi Kwacha
MITC	Malawi Investment and Trade Centre
MoLYS&MD	Ministry of Labour, Youth, Sports and Manpower Development
MSCE	Malawi School Certificate of Education
MSME	Micro, Small and Medium Enterprises
NCHE	National Council for Higher Education
NEEF	National Economic Empowerment Fund
NPC	National Planning Commission
OLS	Ordinary Least Squares
PSLC	Primary School Leaving Certificate
RBM	Reserve Bank of Malawi

SDGs	Sustainable Development Goals
SEDOM	Small Enterprise Development Organisation of Malawi
SMEDI	Small and Medium Enterprise Development Institute
SME	Small and Medium Enterprises
SQAM	Robust Standardisation, Quality Assurance, Accreditation and Metrology (SQAM) in Malawi
TEVETA	Technical, Entrepreneurial and Vocational Education and Training Authority
Two-PM	Two Part Model
UN	United Nations
UNDP	United Nations Development Programme
USA	United States of America

CHAPTER ONE

INTRODUCTION

1.1 Background

The importance of Education cannot be overemphasized as it is widely known to be a route to economic prosperity. As defined in the Fourth Integrated Household Survey report of 2017, “Education is a building block for human, political and socioeconomic development, particularly important for poverty reduction because it empowers the poor, the weak and the voiceless by providing them with better opportunities to participate in national development” (NSO, 2017).

Education helps to improve business management and the ability to innovate and manage calculated risks. It is key to the advancement in scientific research and innovation, the development of new technologies and a tool for addressing unemployment, inequality, strengthening democracy and cultural vitality (Psacharopoulos, 1985).

Global Entrepreneurship Monitor (GEM) (2013), posits that education is critical to the initial success and sustainability of any enterprise. Requisite competencies such as knowledge, experience, and skills are required to grow a business from the idea stage to commercialisation and replication. These competencies can be acquired through formal and informal education in secondary schools or universities, informal methods like books, websites and or training programmes offered by private and government entities.

Realizing the importance of education, the Government of Malawi together with its development partners, donors and the private sector are undertaking several interventions to improve literacy levels in the country such as the school feeding programme, construction of infrastructures to increase enrolment and learning facilities and student loans in public universities and free primary education. The introduction of free primary school at the dawn of democracy in 1994 resulted in the increase in primary school enrolment and ultimately the establishment of private secondary schools and universities (GoM, 2013). The Government of Malawi has set up the National Council for Higher Education (NCHE) as an independent authority responsible for the registration and accreditation of higher education institutions in Malawi.

The high unemployment rate is of great concern to the government especially amongst the educated youth in Malawi which is a manifestation that most people are job seekers and do not engage in entrepreneurship to create jobs for themselves and others. The Government of Malawi estimates unemployment rate in Malawi to be at 20.4 percent (GoM, 2017). While the unemployment rate has been increasing, so too has been the literacy level. The literacy level in Malawi increased by 8 percent between 2010 and 2011 (NSO, 2017).

A study by Dickson (2008) found out that there is a positive relationship between levels of education, entrepreneurship intention and success. In Malawi, the level of education of the business owner was found to be a determinant of the size of the business with 96 percent of micro enterprises owned by entrepreneurs without formal education while small and medium sized businesses were found to be mostly owned by people with secondary and higher education (Finscope, 2019). With the increase in educational and later alone literacy levels, one would have expected more Malawians engaged in entrepreneurship.

Tertiary education on the other hand has a negative effect on informal entrepreneurship as it increases awareness about the adverse repercussions of entrepreneurship as much as enhanced management skills because of education can help to mitigate the risks associated with entrepreneurship (Jiménez, 2015).

The dilemma about the influence of education on entrepreneurship is what motivated the author to investigate if education in Malawi has indeed an influence on entrepreneurship.

1.2 Problem Statement and Justification of the study

Entrepreneurship in Malawi is mostly practiced by people with low levels of education and that most graduates seek formal or paid employment as compared to venturing into entrepreneurship (Finscope, 2019). Business owners and managers in most developing economies, Malawi inclusive lack the requisite managerial capabilities and that there are fewer support service providers which affect the ability of business owners and managers to grow their enterprises (Finscope, 2019).

A study by Lv et'al. (2021) on college students in China established that teaching entrepreneurship, business plan competition and practical support in entrepreneurship positively affected the competence of entrepreneurs and improved their ability to venture into entrepreneurship. Similarly, Bilic et'al. (2011) found out in Croatia that graduate students were more entrepreneurially oriented compared to undergraduates.

The level of entrepreneurship development in Malawi is at a low level of Income Generating Activities (IGA) and not anywhere close to the level where entrepreneurship can be at the heart of rural economic development which is attributed amongst other factors to lack of business management skills (Mwatsika, 2015).

In Malawi, non-farm enterprises are quite small in terms of employment, with the average number of persons engaged (inclusive of the proprietor) fewer than two. The typical non-farm business is a one-person operation with about 64 percent of all the enterprises consisting of only the proprietor, almost 22 percent having two persons and about 7 percent employing 4 or more persons (NSO, 2017). This shows that most businesses in Malawi are not large enough to create more decent jobs and wealth.

The majority of nonfarm enterprises in Malawi are operated from home and have little potential to create employment, are informal and characterized with high

failure rate (Serge & Benfica, 2017). However, the proportion of households operating a non-farm enterprise increased by education level of the household head from 23 percent (with no education) to 39 percent (with secondary education) (NSO, 2017).

Studies in other countries, South Africa in particular, have shown that education enhances the prospects of one becoming a successful entrepreneur and that there is a very strong relationship between educational levels and entrepreneurship. Educated entrepreneurs from higher education institutions have the know-how and ability to transform ideas into workable solutions (Nicolaidis, 2011).

On the contrary, in Serbia, Stefanović (2012) found out that highly educated individuals prefer paid employment to engaging in entrepreneurship and that self-employment or entrepreneurship decreased with higher educational attainment.

The lack of motivation to engage in entrepreneurship is also contributing to high unemployment rate which has dire consequences to an economy as it leads to loss of income, rural-urban migration, high crime rate, mental depression, drug abuse, hunger, early school dropout, poverty and alcoholism. And if unemployment transformation is to occur in Africa, it may involve a move from employment in agriculture to the creation of more non-farm enterprises (Amaghous & Ibourk, 2013).

Few studies have been done but not in a coherent manner in the Sub-Saharan African region compared to comprehensive studies on education and entrepreneurship in developed countries. The ultimate result has been inadequate information about the local context and limited application of research results to direct policies (Mwiya, 2014). The need for coherent studies on education and entrepreneurship in Sub-Saharan African region further underpins the relevance of this study.

This study therefore intends to investigate whether education in Malawi influences one to engage in entrepreneurship. It is also aimed at providing recommendations that would inform policies for promoting entrepreneurship in Malawi.

1.3 Relevance of the Study

Matita and Chirwa (2009) carried out a similar study though it assessed the relationship between education and self-employment and its impact on farm activities and household incomes in Malawi. Since the business environment is dynamic and significant changes might have occurred since 2009, this study will provide the current status of the situation. Matita and Chirwa (2009) used a Standard and Extended Mincerian Earnings Function to estimate the Rate of Return on Education from Self- Employment using the Ordinary Least Square Method. On the contrary, this study will use a Two-Part Model (2PM) which unlike the Standard and Extended Mincerian Earnings Function assesses if education influences one to venture into entrepreneurship and independent of the decision to venture into entrepreneurship, determines the amount of investment an individual who ventures into entrepreneurship makes. The choice of this model was influenced by the nature of the outcome variable which was a continuous- discrete random variable.

Additionally, the Two-Part Model considers the impact of earnings as there is a strong Granger causality relationship between capital invested in businesses and earnings (Inc, 2014). Most entrepreneurs are risk averse and will therefore only invest in a business where they are assured of a return.

Both unemployment rate and school enrolment in Malawi have been increasing over the past years. The annual rate of change in enrolment per 100,000 for Malawi is about 10.53 percent and is one of the highest, above the Sub Saharan Africa average of 8.21 percent (World Bank, 2010). With the increase in school enrolment, one would expect more educated Malawians starting and owning successful businesses.

This study brings to light whether education in Malawi fosters entrepreneurship. The study further builds on already existing scanty research information and thus informs policy formulation and implementation with a goal of creating a conducive entrepreneurship ecosystem. Additionally, it will inform the design of academic and vocational curricula of training institutions and other interventions that inculcate and sharpens entrepreneurial skills in Malawians.

1.4 Study Objectives

1.4.1 Main objective

The main aim of the study is to assess if education influences one to engage in entrepreneurship in Malawi.

1.4.2 Other objectives

- i. to investigate other factors (age, location, gender, capital, and alternative income sources, religion, cellphone ownership and medical insurance) that determine entrepreneurship in Malawi.
- ii. To investigate how much investment is made by those that decide to venture into entrepreneurship.

1.4.3 Hypothesis Testing

The study will test the following null hypotheses:

H₁: Education does not influence one to engage in entrepreneurship.

H₂: Other factors (age, location, gender, capital, and alternative income sources) do not influence entrepreneurship.

H₃: There is no difference in the amount of investment made by those who decide to venture into entrepreneurship.

1.5 Organisation of the study

The study has been organized in chapters as follows: Chapter One gives brief background information to the study, the author's motivation for the study and the study objectives and relevance. Chapter Two gives a brief profile of entrepreneurship in Malawi and existing legal and institutional frameworks that are designed to support the creation of a vibrant entrepreneurship landscape in the country. Chapter Three is a summary of relevant and similar studies that have been conducted on the subject matter globally but with a focus on Sub-Saharan Africa. The literature is categorized into Theoretical and Empirical Literature. Chapter Four describes the methodology that was adopted to conduct the study and gives information about the source of data, econometric model and diagnostic tests that were conducted to test the fitness of the model. Chapter Five interprets and explains in detail the key output from the econometric data analysis. Finally, Chapter Six summarizes key lessons from the study and proposes policy recommendations.

CHAPTER TWO

PROFILE OF ENTREPRENEURSHIP IN MALAWI

2.1 Introduction

This chapter presents a summary of entrepreneurship in Malawi and builds on the previous chapter where the importance of education in enhancing entrepreneurial competency has been highlighted and why the study is relevant. The level of entrepreneurship has also been discussed in relation to Micro Small and Medium Enterprises (MSMEs). The chapter gives a picture of entrepreneurship in Malawi and highlights the importance of education and Government of Malawi's key strategies and policies in promoting entrepreneurship. The chapter further presents the importance of entrepreneurship in fostering economic growth and development of a country.

2.2 Entrepreneurship in Malawi

2.2.1 Malawi Government's Policies and Plans

The Government of Malawi formulated the Malawi Growth and Development Strategy III as a catalyst for building a productive, competitive and resilient nation. The Government singled out Education and Skills Development as one of the four key priority areas of focus to stimulate socio-economic development and industrial growth in Malawi. The Government aims to reform the education system to include entrepreneurship and vocational skills development to improve employability as well as entrepreneurship in the country which has the potential to address youth unemployment.

The Malawi Government developed the Malawi Vision 2063 (MW2063) as a successor to Vision 2020 whose aim is to transform Malawi into a wealthy and self-reliant, industrialized upper middle-income country by 2063.

The National Planning Commission (NPC) championed the review of Vision 2020 in 2019 and supported the formulation of MW2063. Guided by the MW2063, the Government of Malawi will prioritize investment and entrepreneurship development to achieve inclusive wealth creation and self-reliance. MW2063 was designed to address several challenges including those that the youth face which impeded on their active participation and contribution to sustainable economic growth and development of the country. MW2063 aspires to make the education system responsive to the current and future skills required for industrialization and to achieve this, the school curriculum will be reviewed to include educational tenets of entrepreneurship, innovation, creativity, ethics and values. Specifically, the education system will be modeled to incorporate academic excellence, technical and vocational skills suitable for entrepreneurship, the labour market and for the implementation of the vision itself. Science, technology and innovation advancement will be promoted to create a highly knowledgeable workforce.

The National Agricultural Policy in a special way recognizes the importance of education and entrepreneurship in promoting agricultural productivity for national food security and economic growth and development. The policy recognizes that only trained entrepreneurs will be able to establish a brand name, advertise or market their products or services and set up demonstrations and be able to expand their market shares. The policy further recognizes that trained entrepreneurs would be able to negotiate for themselves better contracts with farmers for seed production, processing, packaging and marketing (GoM, 2016).

Realizing the importance of entrepreneurship to the Malawian economy, the Government of Malawi formulated an MSMEs Policy in 2019 to succeed the one which was formulated in 2012. The revised MSMEs Policy maintained the same definition of MSMEs as the previous one which categorised the MSMEs based on the number of employees an enterprise has. A Micro Enterprise is the one which has 1 to 4 employees, whilst a Small Enterprise has between 5 and 20 employees and Medium Enterprise has between 21 and 99 employees. The new MSME policy was designed to respond to the current economic environment and has incorporated access to market, business infrastructure, MSMEs networks and clusters, credit reference bureau, environment and HIV/AIDs. The new MSMEs policy emphasizes for firm-to-firm linkages (sub-contracts, franchising, licensing and joint venture),

provision of export support services, promotion of the Buy Malawi Strategy and empowerment of MSMEs through public procurement as a means for improving access to markets. The new MSME Policy focuses on the need for the development and improvement of business infrastructure facilities for MSMEs such as factory shells, industrial parks, artisan sheds and exhibition centres. The policy is encouraging all Local Government Authorities (LGAs) to set aside specially designated, serviced land with potential commercial and industrial development for MSMEs growth. The policy supports LGAs to review legislation and regulations to improve access to affordable land and business infrastructure by MSMEs including access to well-regulated, rented business shelters and supporting the implementation of public procurement and asset disposal law. The policy aims to strengthen and promote the use of the credit reference bureau and encourages financial service providers to use the collateral registry as one of the strategies for improving access to finance. And due to government efforts and those of its cooperating partners, Malawi has registered an improvement in entrepreneurship as evidenced by the increase in number of individual entrepreneurs from 760,000 MSMEs owners in 2012 to 1.1million MSMEs owners in 2019. During the same period, the number of MSMEs also increased from 1million to 1.6million (Finscope, 2019).

On cross cutting issues, the new policy aims at addressing the social economic barriers faced by the youth, women and vulnerable HIV/AIDS groups to boost the productive base of the economy. The policy champions for environmentally sound infrastructure and production methods, promote the conservation of the environment by MSMEs to reduce environmental degradation and waste of costly resources and enhance the competitiveness of locally produced goods and services.

The Government of Malawi has been grappling with huge trade deficits over several years because of high import volume compared to exports and to increase exports, the Government of Malawi developed the National Export Strategy (NES) with the aim of boosting the productive and export base of the country. The National Export Strategy underlined the importance of entrepreneurs in building a productive base that match the level of imports into the country in addition to job creation and improved returns for the business owners (GoM, 2012).

The Malawian economy was liberalized to reduce government interference and to allow inflow of foreign investment and because of this, there are both local and foreign investors who are involved in entrepreneurship in different sectors of the economy. According to Masina (2016), foreign owned Small and Medium Enterprises (SMEs) in Malawi do well compared to the enterprises owned by the indigenous people because foreign business owners have better educational background, capital and training compared to local entrepreneurs.

At the continental level, Africa Agenda 2063 was developed as a blueprint and master plan for transforming Africa into a global powerhouse. The agenda seeks to deliver on a set of seven aspirations of which, aspiration number one aims to create a prosperous Africa through inclusive growth and sustainable development. The goal number two of aspiration number one recognizes the importance of developing Africa's human and social capital through education and skills revolution underpinned by science, technology and innovation. The agenda advocates for strengthened technical and vocational education and training through increased investments, establishment of high-quality TVET centres across Africa, fostering linkages with industry and alignment to the demands of the labour markets with the goal of improving skills profile, employability and entrepreneurship of especially the youth and women (African Union Commission, 2015).

At international/global level, there is growing recognition of education as a key enabler for sustainable development. Under the United Nations (UN) Sustainable Development Goal (SDG) Number Four (4), "ensure inclusive and equitable Education and promote life-long learning opportunities", the UN set a target to substantially increase the number of the youth and adults who have relevant skills including technical and vocational skills for employment, decent jobs and entrepreneurship by 2030.

2.2.2 Education versus Entrepreneurship

Through the MSME Policy of 2012, the Government of Malawi bemoaned that the education system tended to create employment seekers rather than job creators and that there was need for entrepreneurship development aimed at creating conducive environment for young entrepreneurs to access relevant entrepreneurial skills, knowledge, values and attitudes (GoM, 2012).

The modern advancements in the business environment are increasingly demanding entrepreneurs to possess special skills other than their innate drive if they are to survive in business and make profits. These advanced business management skills can be acquired through either formal education or specialized training (Finscope, 2019) .

The inclination to venture into entrepreneurship amongst university graduates and those with vocational education is very low in Malawi which could be attributed to the high risk of failure and opportunity cost to forego full time employment (Finscope, 2019). This trend potentially explains why MSME ownership is dominated by entrepreneurs with lower levels of education in Malawi who often lack the aspiration to grow their businesses by introducing new products and services.

The need for provision of business support services is high in Malawi because most (96 percent) of the entrepreneurs are without or with low educational levels. As shown in Figure 1, there are 53 percent of the MSMEs' owners who have at least primary education whilst 32 percent completed secondary education and 9 percent are without any form of education (Finscope, 2019).

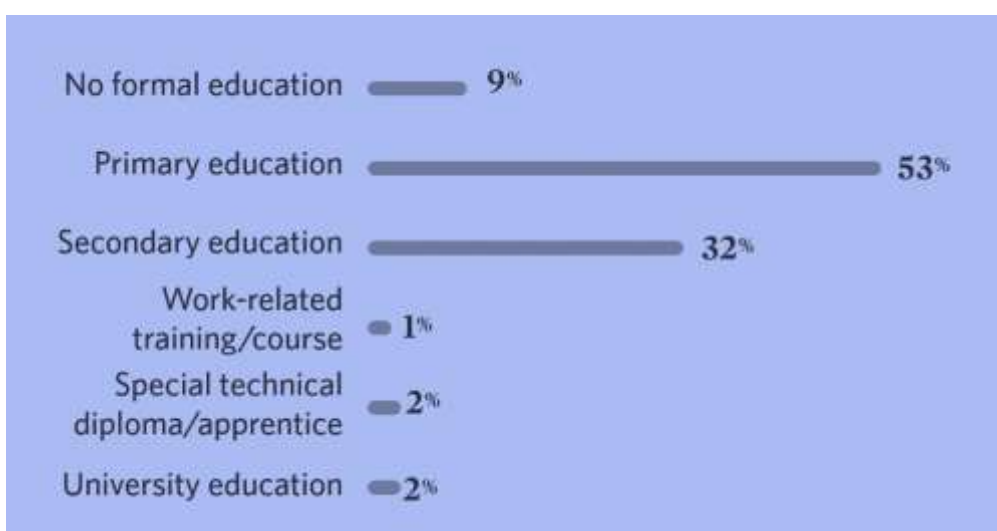


Figure 1: Levels of education and MSMEs owners

Source: Finscope MSME Malawi Survey (2019)

2.2.3 Entrepreneurship by Age

Youth entrepreneurs (aged between 18 and 34 years) constitute 42% of the MSMEs owners and that most youth lack the requisite education and financial resources to establish and grow their businesses (Finscope, 2019).

The lack of skills to manage risks and grow viable businesses explains why the average age of businesses in Malawi is 7.5 and a third of the MSMEs in Malawi are aged less than 3 and only 39% of the MSMEs being older than 6 years (Finscope, 2019).

2.2.4 Nonagricultural enterprises

About 80% of the MSMEs in Malawi are somehow related to agriculture, are necessity driven and most of them are established as a response of owners not being able to get full time employment other than being a response to opportunities in times of economic growth. Thus, these MSMEs have a short life span and are not able to benefit from economies of scale and accumulated experience of being in business long enough (Masina, 2016).

The private sector in Malawi is not diversified and the exposure to risk for over-relying on one major sector, agriculture is therefore huge. About 27 percent of households were involved in enterprises other than agriculture and that there were two times more households operating business in urban areas (45 percent) compared to rural areas (23percent) (NSO, 2017). As shown in Figure 2 below, wholesale, retail, accommodation and food services constitute the largest non-agriculture enterprise sector (72 percent) trailed by manufacturing (16.4percent) transport (4.7percent), other services at (4.5%), construction 1.0 percent, retail 0.7 percent and mining 0.3 percent (NSO, 2017).

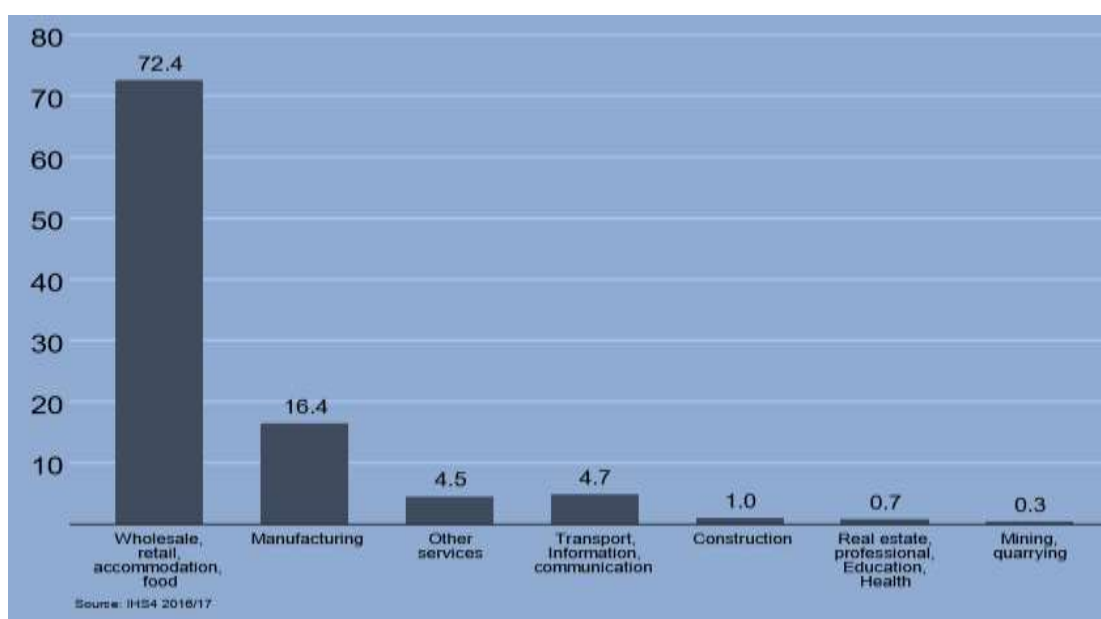


Figure 2: Classification of non- agriculture enterprises by sector

Source: The Fourth Integrated Household Survey Report

2.2.5 Institutional framework to promote entrepreneurship (MSMEs)

To improve the entrepreneurship ecosystem, the Government of Malawi with support from the private sector and international aid agencies has devised several interventions and established institutions that have targeted individuals and groups of entrepreneurs. These interventions and institutions have helped entrepreneurs to access technical support, markets and even finance for their enterprises and include:

a) The Technical, Entrepreneurial and Vocational Education and Training (TEVET) Authority

TEVETA is a regulatory body which was established in 1999 through an Act of Parliament. The main purpose of TEVETA is to contribute to human resource development through sustainable skills training and development to spearhead the country's production and export-led socio-economic growth. TEVETA's mission is to regulate, promote and facilitate sustainable provision of quality technical, entrepreneurial and vocational education and training in Malawi. TEVET's trainings are mainly financed through the TEVET levy and donors e.g. European Union (EU).

b) Small and Medium Enterprise Development Institute (SMEDI)

The Small and Medium Enterprise Development Institute (SMEDI) was created in 2013 after the Government of Malawi merged three institutions namely: The Small Enterprise Development Organisation of Malawi (SEDOM), Development of Malawian Enterprises Trust (DEMAT) and Malawi Entrepreneurship Development Institute (MEDI). SMEDI was registered under the Trustees Incorporation Act (cap 5.3) of the Laws of Malawi to promote the development and growth of sustainable Micro, Small and Medium Enterprises in Malawi by partnering with the Government of Malawi and other key players to create an enabling environment, facilitate access to finance, information and markets for MSMEs and to provide relevant, needs-based business development services.

c) The National Economic Empowerment Fund (NEEF)

The National Economic Empowerment Fund (NEEF) is a Government of Malawi owned microfinance institution whose mission is to economically empower ordinary and underserved Malawians especially women, the youth and persons with disability through the provision of quality, affordable and sustainable microfinance services for improved livelihoods. NEEF was issued a license as a Non-Deposit Taking Microfinance Institution in 2010 by the Reserve Bank of Malawi (RBM). The fund is managed in form of a revolving fund. NEEF was formerly known as the Malawi Enterprise Development Fund (MEDF) before its reconstitution in 2020. MEDF was registered under the Company Act of 2013 and was governed by the Financial Services Act of 2010 and the Public Finance Management Act. MEDF also evolved from another institution which was known as Malawi Rural Development Fund (MARDEF) which was established through an act of Parliament to improve access to finance by Malawians who wanted to set up small businesses and expand old ones.

d) Malawi Agricultural and Industrial Investment Corporation (MAIIC)

The Malawi Agricultural and Industrial Investment Corporation (MAIIC) is a development finance institution which the Government of Malawi established following the results of a feasibility study in 2013 that established that there were significant financing gaps particularly in the areas of infrastructure development and for SMEs. MAIIC collaborates with existing banks and financial institutions,

private sector and international investors to provide capital to the underserved sectors of the economy thereby contributing to the acceleration of the country's economic growth and development. MAIIC provides both credit and equity investment into the enterprise and the interest rate is based on the value of the loan advanced to the enterprise which ranges from 11% to 23%.

e) Export Development Fund (EDF)

The Export Development Fund (EDF) was incorporated as private limited company in 2012 by various stakeholders which included the Government of Malawi, the private sector (domestic banks) and business associations to promote the creation of vibrant and viable export businesses and industries in Malawi. EDF provides finance, equity or credit guarantees and advisory services for the setup, expansion and modernization of viable medium and large-scale enterprises involved in export markets.

f) Jobs for Youth Project

Malawi's Jobs for Youth Project was part of the African Development Bank's (AfDB) Jobs for Young People in Africa (JfYA) 2016-2025. The Malawi's Jobs for Youth Project's objective was to economically empower the youth population (young women and men) for improved employability in decent work and sustainable entrepreneurship in Malawi. The Ministry of Labour, Youth, Sports and Manpower Development (MoLYS&MD) was the implementing agency of the project. The project aimed at addressing the lack of entrepreneurship mind-set as well as the weaknesses in technical and business skills, lack of access to markets and information, the lack of access to finance and the weaknesses at the policy and regulatory level for the promotion of youth owned SMEs and the low level of employment of youth by the existing private sector. The project worked with training institutions or universities to establish business incubators for providing business mentorship and coaching to the youth. The project also supported internship programme for the youth.

g) Malawi Growth Accelerator Entrepreneurship Programme

The Growth Accelerator Entrepreneurship Challenge project aims at supporting innovative entrepreneurs with both financial and technical assistance which comes as a single package in a bid to scale up their ventures. The project amongst others

aims to contribute towards SDGs 1,8 and 9. The project realizes that provision of finance alone to MSMEs is not enough to build sustainable business models and for this reason, the project has a component of business training and mentorship for entrepreneurs. Initially, Growth Africa partnered Mhub, a local tech business incubator to implement the project but now it's Imani Development in a joint venture with Landell Mills who are the implementers . The project is funded by the United Nations Development Programme (UNDP) and Norwegian Embassy where selected MSMEs are given a matching grant of up to \$40,000.

h) Malawi Confederation of Chamber of Commerce and Industry

The Malawi Confederation of Chambers of Commerce and Industry (MCCCI) is a member organisation of enterprises and associations from all the sectors of Malawian economy. MCCCI's goal is to promote socio-economic development of the country through joint action and enlightened dialogue amongst members of the Malawi private sector. It acts as a mouthpiece of the private sector in Malawi and is involved in conducting research about the business environment, policies that affect the private sector and acts as a source of information for prospective investors in the country and issues certificate of origin of goods. It also facilitates trade promotion events including hosting international and local trade fares and represents the private sector at both local and international fora and has premises which are rented out to small businesses in Blantyre.

i) Malawi Investment and Trade Centre

The Malawi Trade and Investment Centre (MITC) mission is to promote and facilitate sustainable, inclusive and transformative investments and trade in Malawi. The institution's main objectives are to act as a one-stop shop for the provision of specialized support to foreign and local investors in all prioritized sectors for industrializing Malawi and to promote and facilitate export products and services from Malawi to international markets. Additionally, MITC plays an advisory role to Government on policies with a bearing on business environment.

j) Malawi Bureau of Standard

The Malawi Bureau of Standard (MBS) was established in 1972 through an act of Parliament (Cap 51:02) of the Laws of Malawi (Amended as Act No 14 of 2012). MBS mandate is to promote metrology, standardization and quality assurance of

commodities and of the manufacture, production, processing or treatment thereof and further to provide for matters incidental to or connected with standardization.

With funding from EU, UNDP and the Government of Malawi, MBS is implementing a project known as “Robust Standardisation, Quality Assurance, Accreditation and Metrology (SQAM) in Malawi”, which is aimed at improving and increasing Malawi’s exports through the reduction of cost of doing business by reducing the need for re-testing, re-inspection, re-certification abroad through acceptance of measurements, tests and conformity assessment results issued in Malawi. These services are currently sought outside Malawi and are very expensive to the MSMEs.

CHAPTER THREE

LITERATURE REVIEW

3.1 Introduction

This chapter presents a summary of the theoretical and empirical literature on the influence of education on entrepreneurship after going through the Government of Malawi's policies and key strategies for creating an enabling environment for promoting entrepreneurship. It presents the different research findings that have been done on the subject matter across the world and looks at the differing views that exist on the topic under the study. Furthermore, the chapter presents a list of common concepts and definitions on entrepreneurship. Firstly, theoretical literature is presented and secondly, empirical literature.

3.2 Theoretical Literature

Entrepreneurship started way before the 17th Century and has evolved over the years. Richard Cantillon was the first person to use the word, "Entrepreneur" in 1755. Entrepreneur is a French word, which means to undertake. Richard Cantillon described an entrepreneur as a person who bought a product at a certain cost with an aim to sell the same at an uncertain price.

Entrepreneurs are from all walks of life and their contributions are wide ranging. The major social and economic contributions of entrepreneurship include but not limited to job creation, economic growth, poverty alleviation and formalisation of the informal sector (Manfred Schmiemann, 2012).

Some countries have taken advantage of entrepreneurship to propel their economies such as Israel which is known as a “startup nation” and the United States of America (USA) which has several serial entrepreneurs while others have lagged behind even with abundant natural resource endowments for example, the Democratic Republic of Congo (DRC).

Entrepreneurship has assumed super importance for accelerating economic growth both in developed and developing countries as a pathway to prosperity. It is regarded as a catalyst for capital accumulation and formation, creation of jobs and wealth (Kaburi, 2012).

The economic growth and development of a country is to a larger extent determined by the number and competence of its entrepreneurs as evidenced by the significant developmental roles entrepreneurs have played in several advanced economies. It is for this reason that entrepreneurs have been the focus for policy makers from underdeveloped and developing countries (Kihoro, 2012).

The USA has stood out as the quintessential entrepreneurial society, from the period of Civil War until to date. The USA has spawned iconic and renowned entrepreneurs one after the other, from John D. Rockefeller to Henry Ford to the twentieth century, information age pioneers; Bill Gates and Steve Jobs. And there are many more other American entrepreneurs whose stories are less well known (Carlen, 2016).

Entrepreneurship has evolved through the agricultural revolution of the 18th Century, Industrial Revolution of the 19th Century to the Modern Entrepreneurship characterized by innovation and globalisation. The evolution and theorization of entrepreneurship have involved psychologists, sociologist and economists and other social scientists who have used different methodologies to study it and, different theories about entrepreneurship have emerged from the different schools of social scientists (Cherukara & Manalel, 2011). These different schools of thoughts are summarized in Table 1 below.

Table 1: Evolution of Entrepreneurship through Various Schools of Thought

A- ECONOMICS				
Year	Author	School of thought	Highlight of Theory	Key Terms
1755	Cantillon	Early and Classical	Entrepreneurs work on uncertain wages	Uncertain wages
1803	Say	Early and Classical	Entrepreneur coordinates and combines factors of production	Factors of production
1982	Casson	Mainstream	Successful entrepreneurs demonstrate good judgment in decision-making, risky innovations and are rewarded through either profits or salaries.	Judgment risk innovation and reward.
1928	Schumpeter	Radical	Innovation, creative destruction, detached risk from entrepreneur	Innovation and detached risk
B- SOCIOLOGY				
Year	Author	School of thought	Highlight of Theory	Key Terms
1904-1906	Weber		Entrepreneurship determined by religious concepts.	Religious concepts
1963	Hoselitz	Social Marginal	Social and ethnic minorities show high level of entrepreneurship	Social, ethnic minorities.
1999	Thornton	Evolutionary Approaches	Defines entrepreneurship as the creation of new organisations which occurs as a context-dependent, social and economic process.	Creation of new organisations, context-dependent, social and economic process.
C- PSYCHOLOGY				

1961	McClelland		Entrepreneurial pursuits represent the desired moderate risk situations for individuals with high need for achievement.	Moderate risk solutions. High need for achievement.
1966	Rotter	Locus of Control	Those with internal locus of control will give heightened alertness, which is essential for incidental learning (recognition of opportunities) with spontaneous learning resulting into entrepreneurial behavior.	Internal /external locus control, incidental learning.
2000	Chell	Social Construction	Entrepreneurs are distinguished from non-entrepreneurs by their motivation for wealth creation, capital accumulation, the ability to recognize opportunities and their judgment.	Motivation for wealth creation, recognize opportunities judgment.

Source: Cheruka and Manalel 2011: Evolution of Entrepreneurship Theories Through Different Schools of Thought

On the other hand, Simpeh (2011) purports that there are a number of entrepreneurship theories that have been developed and this study is informed by the **Resource- Based Entrepreneurship Theory** which stipulates that access to financial, social and human resource is important for one to detect and act upon opportunities. The Resource-Based Entrepreneurship Theory emphasizes the importance of education for human capital development and its impact on entrepreneurial activities. The theory stipulates that financial capital is required for one to engage in entrepreneurship and that there is need for social capital or business connections for a business to grow and be successful. The theory further underlines the importance of human resources for the success of the business which relates to skills, knowledge and experience of the entrepreneur. The theory stipulates that entrepreneurs possess special traits that differentiate them from the rest of the

people which enable them to reap economic opportunities in a market (Stevenson, 1990). These special traits are acquired from education and allows entrepreneurs to be more creative and innovative to seize business opportunities (Schultz, 1971). The investment in human capital enhances entrepreneurial activity and that well trained and educated people are a catalyst for economic growth and development of a country (Schultz, 1971). Similarly, Sofoluwe (2013) argues that increased expenditure on education, training and skills acquisition is an effective empowerment strategy that makes people to be more innovative, efficient and productive.

3.2.1 List of definitions

Entrepreneurship has been defined from different perspectives and disciplines namely economics, management, organisation, sociology and philosophy but the author has provided only key definitions that relate to this study. Most scholars agree that entrepreneurship is a phenomenon that is found across the entire economy, going beyond the confines of the market economy to include society, for example, encompassing organisations such as nonprofit making enterprises. Furthermore, entrepreneurship may be practiced by everyone, from the self-employed individual, through small and medium-sized enterprises (SMEs) to large multi-national concerns (Finscope, 2019).

Education is the process of learning to live as a useful and acceptable member of the society (Farrant, 1964).

Entrepreneurship Education is the transfer of knowledge and skills about how to create, manage and grow a business (Kihoro, 2012).

Entrepreneur: Kihoro (2012), defined an entrepreneur as “a person, who takes initiative, assembles the necessary resources, risks his own money, undertakes a new venture, introduces something new and useful and is eventually rewarded with a profit or loss, monetary benefits, personal satisfaction and independence”.

Entrepreneurial Activity is defined by Kaburi (2012) as “the enterprising human action in pursuit of the generation of value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets”.

Entrepreneurship: It is the act of identifying business opportunities, organizing the necessary resources and taking calculated risks to establish a successful enterprise (Kihoro, 2012).

Graduate Entrepreneurship: Is concerned with the extent to which graduates as products of university/college education engage in new venture creation or self-employment (Mwiya, 2014)

Entrepreneurial Intention: Is a self- acknowledged conviction of a person to venture into entrepreneurship at a certain optimum moment in the future.

Unemployment refers to persons who are without a job for pay or profit and are actively looking for one and available to start working at a defined period (ILO, 2015).

Employers are workers who, working on their own account or partnership, in a self- employment job have engaged other people as employees to work for them for pay in their enterprises (ILO, 2015).

Paid employment involves employees while self-employment involves employers, own account workers, contributing family workers and members of producers' cooperatives (ILO, 2015).

Entrepreneurship versus self-employment: The Government of Malawi's Vision 2063 regards entrepreneurship as a precursor to addressing unemployment especially amongst the youth and in so doing underlining the link between entrepreneurship and job creation. This view and approach of the Government of Malawi is supported by Guerra and Patuelli (2016) who found out that advanced economies with an increase in self employment are associated with a flourishing small and medium size enterprise sector.

OECD (2000a) defined self employment as an important form of entrepreneurship and that it relate to jobs where remuneration is directly dependent upon profits generated by the enterprise, decisions made by the entrepreneur and where the enterprenuer has full responsibility for the welfare of the enterprise.

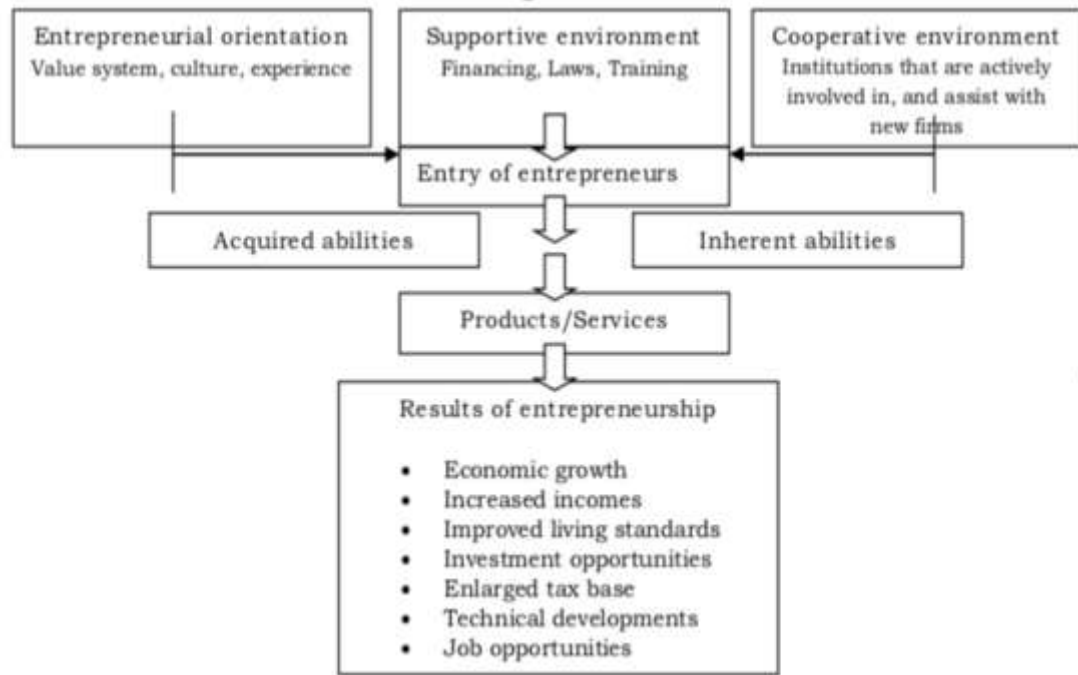
Due to the impact that entrepreneurship has on employment, one can easily be tempted to generalise or think that entrepreneurship is synonymous to self employment. A study by Szaban and Lubasinska (2018) revealed major discrepancies in the definitions and approaches in entrepreneurship and self-employment theories. The study found out that not all entrepreneurs are self employed and not all self employed are entrepreneurs. According to the study, entrepreneurs are the ones that innovate to produce new products or services, apply new methods of production or sale, open a new market for existing products and services, gain new sources of raw materials and apply new organisational form and that such innovative or productive entrepreneurs have all the main characteristics of a self employed person. OECD (2000a) further defines this form of self employment as the one not related to rent seeking activities or other non innovative areas.

This study focuses on innovative or productive entrepreneurs who are capable amongst others of fostering inclusive, resilient and sustainable economic growth through revenue generation, creation of self employment opportunities and improving food security and nutrition.

3.2.2 Entrepreneurship Development Theories

The level of entrepreneurship development differs between individuals and from one country to the other. In Malawi, entrepreneurship development is still at a nascent stage and is affected by several factors. Entrepreneurial orientation, supportive environment (education) and cooperative environment are the three broad factors that can help to realize the fruits of entrepreneurship namely: economic growth, increased incomes and job creation as illustrated in the Nieman 2003 Entrepreneurship Development Model (Mwatsika, 2015) shown in Figure 3 below.

Figure 3: Entrepreneurship Development Model



The above Entrepreneurship Development Model looks at three main areas namely: Entrepreneurship Orientation, Supportive Environment and Cooperative Environment which create a robust entrepreneurship ecosystem for the enterprises to thrive. As is the case with the other areas, the Supportive Environment of the Entrepreneurship Development Model directly links training or education which is the main focus of this study to entrepreneurship and entrepreneurial benefits. Education has been deemed amongst other factors in the model as a precursor for an individual to consider venturing into successful entrepreneurship, a requisite for the development and provision of market-based products and services.

The model gives emphasis of the resultant economic contributions of entrepreneurship which are economic growth, job creation, increased earnings, expanded investment opportunities and government revenue base from taxes and technological advancement.

The author's choice of focus on the Supportive Environment which is consistent to the Resource Based Entrepreneurship Theory which has been discussed in the previous section does not in any way negate the importance of the Entrepreneurship Orientation and Cooperative Environment. The three form an entrepreneurial ecosystem which is critical for the creation and growth of a vibrant entrepreneurship sector or value chain. The choice of the Supportive Environment was rather based

on the scope of the study and limited resources. Furthermore, the linear econometric model of this study has considered other pertinent variables that relate to both Entrepreneurship Orientation and Cooperative Environment hence the two are not absolutely disregarded in this study.

The subsequent sections have explained at length the three main areas of the above Entrepreneurship Development Model.

a) Entrepreneurship Orientation (Value System, Culture and Experience)

Entrepreneurship orientation looks at the environment in which someone lives or was brought up as having an influence on his entrepreneurial behavior. There is strong evidence that entrepreneurs tend to have either entrepreneurial parents or peers from which they get the inspiration and are ingrained with a spirit of independence, accomplishment, and self-employment at an early stage of their life (Hisrich, 2005).

There is a direct relationship between culture and entrepreneurship. Cultural norms and values help entrepreneurs to innovate business ideas and to take risks. Family and peers provide the requisite moral, social network and capital, knowledge and financial support to entrepreneurs to start and grow their businesses hence they are a source of entrepreneurial intention (Ijaz, 2012).

b) Supportive Environment (Training, Financing, and Laws)

For entrepreneurship to grow, there is need for training to build the managerial capacity of entrepreneurs to start and grow their businesses that are capable of stimulating economic growth and development of the country. Furthermore, there is need for entrepreneurs to have access to affordable and readily available capital, technologies and appropriate legal instruments.

A culture of entrepreneurship is significant in countries with a favourable institutional framework (Amaghous & Ibourk, 2013). Governments have, therefore, a critical role to play to ensure that a conducive environment exists for entrepreneurship to thrive.

Government's entrepreneurship policies can influence both the supply side and demand side of entrepreneurship. The supply side of entrepreneurship can be influenced through the introduction of entrepreneurship at all levels of the education system, streamlining procedures for issuing business licenses and permits, formulating favourable labour and tax laws. On the other hand, the demand side of entrepreneurship can be influenced through enhancing the ability of the entrepreneurs to raise capital internally and externally, research and development, patent systems and business support programmes and services oriented to new entrepreneurs, incubators, one-stop shops, mentoring and networking. Furthermore, Government can promote entrepreneurship activity by tackling binding constraints such as the cost of doing business, inflation, political stability and corruption (Omer & Slimane, 2014).

c) Cooperative Environment

For entrepreneurship to develop, the whole ecosystem comprising of different stakeholders has to be supportive of it in order to match and enhance the orientation of people towards entrepreneurial practice (Mwatsika, 2015). As already discussed by the author in Chapter Two of this report, there are a number of organisations that the Government of Malawi has established to create a cooperative environment in Malawi and includes but not limited to SMEDI, MITC, TEVETA, MAIIC and MCCCCI.

3.2.3 Education

Education has been the driver for political, social and economic transformation world over. It acts as an integrative force that imparts values that foster excellence, social cohesion, and national development. Recognising the importance of education, policy makers have recently placed an unprecedented attention in the field of education named as "Entrepreneurial Skill Development Through Education". As a discipline, entrepreneurship education strives to inculcate skills in persons for them to play a role of catalyst for socio-economic transformation. It helps to shape the future society as well as an individual person's life simultaneously (Gautam, 2015).

Several scholars, policy makers and private sector champions have repeatedly pronounced the importance of education in all the spheres of human life including entrepreneurship. Education is regarded as a capital asset for developing the citizenry of any country for the achievement of sustainable economic growth and development (Olaniyan, 2008).

While the focus of this study is on formal education, the author is aware that human capital development is also a product of training which includes real life experiences and learning derived from previous life encounters such as paid and unpaid employment (Gatewood, 2004).

In addition to increasing the number of entrepreneurs, another aim of an education programme is to turn out more competent entrepreneurs who possess the ability to develop new ventures with a high growth potential. To fill a new role as active contributors to regional economic development, universities are asked to promote entrepreneurship in general, and commercialisation of knowledge and research. A traditional approach to entrepreneurship education has been indirect, believing that educated individuals would subsequently start new ventures (Rasmussen, 2006).

In Kenya, entrepreneurship development primarily targets the youth in tertiary training institutions i.e., technical training colleges and universities. It introduces the youth to entrepreneurship education with the aim of making them start to reflect on entrepreneurship and its role in an economy. The youth are given an opportunity to analyse the difficult employment situation in Kenya and are incentivized to consider self-employment as an alternative career option. Stacked up against such choice are many of business failures in the community, negative attitudes towards entrepreneurship, and misconceptions about what makes an enterprise succeed. It is aimed at dispelling the notion that all you need to succeed is capital. Entrepreneurship education trainers are thus tasked to help counter these negative influences with positive ones which are done through the presentation of role models and case studies of successful small enterprises. The challenge has been on how to integrate entrepreneurship concepts and practices in schools and colleges. Students are motivated to initiate micro-businesses while still in college to enable them acquire business management skills. They are also required to identify potential businesses and then prepare business plans and present them as part of

their final year evaluation on the subject (Kaburi, 2012).

Global Entrepreneurship Monitor (GEM) survey in 2010 found out that past entrepreneurship training was associated with new business creation. Developed countries have higher proportions of individuals who have received entrepreneurship training than developing countries. No wonder, developed countries have higher proportions of trained individuals involved in business start-up than developing countries (Gibcus, 2012).

Managerial and leadership skills are very critical in managing and growing an enterprise and these are amongst the many reasons there are more SMEs than large enterprises in many countries including Malawi. An individual who would like to become an industrial entrepreneur must possess additional traits to those of making profits. He must have managerial abilities and more importantly, the ability to lead (Hoselitz, 1960).

Entrepreneurship education on its own is not enough as graduates of an entrepreneurship training programme are supposed to be exposed to real life situation or corporate life as part of further honing their skills to become better business managers or owners. Additionally, corporate experience helps entrepreneurs to accumulate the necessary financial resources for starting their own businesses (Qadri, 2018).

3.2.4 Empirical Literature

This section gives a synopsis of the available empirical literature on entrepreneurship, with a bias towards education which is the focus of this study. A study by Finscope (2019) showed that basic education improves the overall quality of an entrepreneur by providing him or her with basic skills required for the survival of the business. The study found out that most small business owners in Malawi have low levels of education (68 percent primary education, 11percent no formal education), 19 percent have secondary education, while 3 percent have work-related, special technical diploma and other education levels. The study showed that education is needed to run a successful enterprise in this modern and technologically advanced era and that entrepreneurs with education are better placed to seize and maximise business opportunities and manage threats. It further showed that an added year of education of an entrepreneur significantly improves

the enterprise's profitability and size of business.

According to Isodore (2011), highly educated individuals and those with more work experience, more knowledge of the market and business practice are more likely to opt for self-employment because of their ability to identify opportunities for starting a new business. On the other hand, people with a low level of education may be expected to face difficulties getting employed as such, they have no other options other than engaging in entrepreneurship. It is based on this premise that highly educated people have a higher probability to pursue opportunity-based enterprises, while the less educated entrepreneurs are mostly involved in necessity entrepreneurship (Isodore, 2011).

Education is essential in entrepreneurship as it provides a wide range of skills that are needed for opportunity identification, ability to start a business and efficient decision-making which are crucial aspects of the entrepreneurial culture. These skills directly impact on profitability, growth rates, job formation and value creation of an enterprise (Ugrinova & Vermeulen, 2016).

Highly educated entrepreneurs are more likely to innovate compared to those with little to no education and with the ability to innovate, entrepreneurs with higher education are therefore able to develop and offer new products and services to consumers (Ugrinova & Vermeulen, 2016).

Education is said to have an impact on a person's earnings including the potential to access capital that is required to venture into entrepreneurship. According to Matita and Chirwa (2009), completion of senior primary school enabled one to earn more income by 4 percent per year of education spent in that level, while spending two more years of education to complete junior secondary education allows one to more than double the returns from entrepreneurial activities. The other significant change in earnings from entrepreneurial activities is evident between technical and university education. If the owner of the business completed technical education, the returns on education are on average 20.4 percent compared to 71.3 percent returns if the owner completed university education. The positive effects of higher levels of education on enterprise performance may reflect the high managerial skills embodied in tertiary education".

Education on entrepreneurship can also be attained informally. A study by Ijaz

(2012) in Pakistan showed that peers are the main source of entrepreneurial intention. Peers provide entrepreneurship knowledge, skills, and training and provides a platform for social networking.

While this study does not look at the specific courses offered in the different universities and colleges in Malawi, a study by Tenzin (2018), showed that graduates who have pursued business management courses have a higher likelihood of opting for entrepreneurship as a career choice. The study found out that entrepreneurship education is the key factor to fostering entrepreneurial activities and self-employment. The study further revealed that entrepreneurial behavior is built from a young age and that graduate's entrepreneurial intention increases if the parent owns a business and that female graduates were less likely to venture into entrepreneurship as compared to their male counterparts.

A study in the EU member states found out that primary education is crucial for factor-driven economies while higher education is important for efficiency or innovation-driven economies. The study further found out that within the EU, access to primary and secondary education is not a problem but rather the quality of education, especially the lack of entrepreneurship components on all levels of education (Jakubczak, 2013).

A study among Finish business students found out that there was a strong relationship between Education in Entrepreneurship and Entrepreneurship Intent. The study established that education programmes that give students an opportunity to learn about opportunity recognition and evaluation, starting a new business and organisational entrepreneurship positively affect students' confidence to start their own businesses within five years (Drost & McGuire, 2011).

Educational institutions are not only there to impart knowledge in students to opt for entrepreneurship, but also to nurture entrepreneurial attributes, talent, and initiatives amongst students. In order to achieve this, a conducive environment should be created where students will be able to observe and report on successful entrepreneurial role models, conduct business simulation games and develop business plans for actual businesses as part of their academic studies. Furthermore, students should be encouraged to attend entrepreneurship workshops and participate in entrepreneurial competitions organized by both academic and non-

academic institutions (Farrington, 2012).

In Zambia, the lack of education or training was found not only affecting the efficiency of entrepreneurs but also their ability to diversify their business portfolios, access information as well as inhibits the acquisition of business knowledge such as financial record keeping, cost estimations and computation of profits (Mwaanga, 2016).

A study in Zambia on small-scale aquaculture by Sather (2012) revealed that the lack of business knowledge is a serious hindrance to the sustainable growth of local aquaculture entrepreneurs.

In Tanzania, Nkoniki (2010) found out that there are both internal and external factors to the business entity that limit the growth of small businesses. Inadequate education and training and the lack of proper business plan were found to be part of the internal factors while corruption, government policy, and bureaucratic processes were part of the external factors.

Despite several studies that have established the direct relationship between education and entrepreneurship, there are also other studies that have given contrary views. For example, Dina (2012) found out that in Tanzania, the level of education among women was a low determinant of business start-up and that the kind of training one attended or received had a greater impact on women to make a decision to start a business. Similarly, in Bhutan, Tenzin (2018) found out that women graduates were 7.1% less likely to venture into entrepreneurship in comparison to men graduates.

Apart from education, previous studies also point out to other determinants of entrepreneurship. To begin with, Chirwa (2008) found gender to be significant and that the impact of education on the business performance was less pronounced in male-owned businesses than in female-owned businesses. Chirwa (2008) found out that the attainment of full junior secondary education and higher education are directly related to profitability amongst female-owned enterprises. Further, education was found to be associated with reduction in the probability of experiencing a decline in sales or no change in sales amongst female entrepreneurs than male entrepreneurs. On profitability, the study found out that there were no significant differences in profit margins between male and female-owned

enterprises and that female-owned enterprises tend to grow faster in terms of employment than male-owned micro and small enterprises. Another study that linked the role of gender with education in entrepreneurship was done by Ibru (2009), who found out that many women entrepreneurs in developing countries lack tertiary education and training which affects their ability to access credit as lending institutions consider knowledge acquired through formal education and training as evidence of proficiency. These studies demonstrate that the effect of gender on entrepreneurship is closely linked to education.

Another significant determinant of entrepreneurship is the opportunity cost of entrepreneurship, the ability to forego full-time employment. Kim (2006) found out that at lower income levels, individuals may consider the opportunity costs of starting a business very low while at higher household income levels, individuals may consider that the loss of their current income from full time employment outweighs prospective earnings from a new business. In India, China, Thailand and Australia, a cross-cultural study identified income as the most significant attribute in an individual's choice between self-employment and paid employment (Fitzsimmons, 2005). A study by Omer and Slimane (2014) in North Africa, Middle East and selected Gulf Cooperation Council Nations showed that on the one hand, education increases business managerial acumen and thereby increases the probability of entrepreneurship. On the other hand, education generates better outside opportunities and thus decreases the likelihood of entrepreneurship.

Location can also influence the level of entrepreneurship. In Africa, enterprises and self-employment are more prevalent in urban than in rural areas. Thus, a higher share of income from self-employment is derived from urban areas in Africa which is contrary to other developing countries outside Africa. The level of household income from self-employment also differs from one African country to the other. In Malawi, the urban areas self-employment contributes 22 percent to a household's income, 48 percent in Niger, 43 percent in Tanzania and 33 percent in Uganda (Nagler, 2014).

In Nigeria, Nwibo and Akorie (2013) found that age, education status, experience, annual income, household size, household entrepreneurial history and source of investment capital had a positive impact on entrepreneurship among agribusiness investors.

Other important endogenous and exogenous factors that influence entrepreneurship are the environment, personal values, and work experience. In a study by Shane (2003) education, experience, age, and social networks were found to have a significant positive influence on entrepreneurs' business performance in the USA. Le'vesque (2006) posited that the creation of new businesses was common amongst the youth within the age brackets of 25 to 35. On the contrary, age was found to exhibit a U-shaped relationship with a negative one among the youth and positive among the older people (Zhao, 2021).

Business environmental factors such as access to credit were found to exert much more influence on entrepreneurial activity than individual traits, especially on women. This is the case because an entrepreneur can have all the requisite traits for exploiting entrepreneurial opportunities that the environment could hinder (Isodore, 2011).

CHAPTER FOUR

METHODOLOGY

4.1 Introduction

This chapter presents the empirical approach that was used in the study. It provides information about the source of the data and describes in detail the econometric model that was used and reasons the econometric model was chosen. The chapter uses data gathered from the theoretical and empirical literature from the previous chapters to develop the econometric model.

4.2 Data

The initial plan was to use both primary and secondary data. However, the unavailability of financial resources for conducting the survey restricted the analysis to secondary data only. As such, the National Statistical Office's data for the Fourth and Third Integrated Household Surveys were used. The Third Integrated Household Survey (IHS3) data was used for comparison purposes and helped to enhance the reliability of the study results from the Fourth Integrated Household Survey (IHS4) data. The data used was at household level.

4.2.1 Data Analysis

A statistical package, STATA 15 was used to analyse the data. Both descriptive and econometric results were obtained using STATA as presented in the Results and Description Section 5.3.

4.2.2 Econometric Model Specifications

A Two-Part Model (two-PM) which is used to model behavior where a binary choice model is fit for the probability of observing a positive -versus- zero outcome was used to analyse the data. The Two- Part Model is similar to the double-hurdle model, with the hurdle model being used for count data.

The nature of the data influenced the choice for the Two-Part Model. The outcome variable in this study (the state of entrepreneurship and eventually how much is invested) is a mixed discrete-continuous random variable with non-negative values and a significant number of zeros. With a mass point at zero, a single index model is statistically undesirable and so several alternatives can be used, including the Heckman selection model, the double-hurdle model and the two-part model (Belotti, 2015). While the “hurdle” model is exclusively useful for count data, the two-part model is useful for continuous outcomes (Cameron & Trivedi, 2013; Jones, 1989; Hilbe, 2005). This means that the hurdle model was not an option when modelling entrepreneurial choice in this study. Beyond this, a closely related alternative is the adjusted or generalized tobit, called the Heckman selection model (Heckman, 1979; Amemiya, 1985; Maddala, 1983). Just as with the two-part model, although the Heckman selection model is a multiple-index model that can also be used for discrete-continuous outcomes, the two-part model is more superior as it does not make any assumption about the correlation between the errors of the binary and continuous equations and, from a conceptual standpoint, the zeros in the Heckman selection model denote censored values of the positive outcome, while zeros in the two-part model are true zeros.

In fact, the correlation parameter is very poorly identified in the Heckman selection model such that Monte Carlo simulations show that when data are generated from the Heckman selection without exclusion restrictions to identify the “zeros” equation, the two-part model generally produces better estimates of the conditional mean and of marginal effects than the correctly specified Heckman selection (Belotti, 2015). For these reasons, the study employed the two-part model over the other models. In the estimation, the study used one of the most common versions of the two-part model, as echoed by Belotti et al (2015), where a probit model is used to fit the first part, and the inverse Gaussian (Wald) distribution is used for the second part.

Two-part models can give better estimations and predictions of count data with mass zeros over Ordinary Least Squares (OLS) and the Two-Part Models are understandable, intuitive, flexible and useful in many situations (Kapitula, 2015).

The Two-Part Model can be used where the process for making one decision is independent of the other decision, for example, mechanisms that determine whether

or not a firm uses debt at all are different from the mechanisms that determine how much debt is used by the firms that do use debt (Ramalho & Silva, 2009)

In this case, expenditures are greater than zero ($y_i \geq 0$), and zero are observed a lot more often ($y_i = 0$), calling for special treatment. This means a single index model for such data may not be desirable (Belotti, 2015).

In terms of entrepreneurship, the occurrence of such activity entails that there is a positive expenditure, and when it does not occur, the observed expenditure takes a zero value, thus becoming a zero-censored variable. The two-part model allows the censoring mechanism and the outcome to be modeled using separate processes. In this regard, the two-part models are fitted with the logit and probit specifications for the first part and OLS and Generalised Linear Models (GLM) for the second part. Here, two different sets of regressors may be specified for the participation (decision to venture into entrepreneurship) equation and the quantity (amount to invest) equation (Belotti, 2015)

The binary component (the first part) of the two-part model explains the likelihood of engaging in entrepreneurship (probability of positive outcome) with respect to educational level and is given by:

$$\phi(y > 0) = \Pr\{y > 0|x\} = \mathcal{F}(x\delta) \quad (1)$$

where x is a vector of explanatory variables, δ is the corresponding vector of coefficients or parameters that were estimated, and $\mathcal{F}(\cdot)$ is the cumulative distribution function of an independent and identically distributed error term chosen from the extremed value of the probit distribution. And for the positive outcomes, the model was represented as follows:

$$\Phi(y|y > 0, x) = g(x\gamma) \quad (2)$$

where x is a vector of explanatory variables, γ is the vector of coefficients to be estimated and g is a density function for $y|y > 0$.

The fractional component or the second part of the two-part model represents households that engaged in entrepreneurship and estimates the amount of

investment made by them as follows:

$$E(y|y > 0, x)$$

(3)

Part two assumes that the logarithm of the positive outcomes of y is linear and is specified as Ordinary Least Square Regression of:

$$\ln(y|y > 0, x) \text{ Written as } \ln(y) = x\gamma + \varepsilon$$

(4)

The overall conditional mean of y is presented as:

$$E(y|x) = \Pr(y > 0|x) \times E(y|y > 0, x)$$

(5)

The model is specified as follows:

$$\ln(y) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \dots \beta_{11} X_{11} + \epsilon$$

(6)

where Y represents entrepreneurship (that is, the amount of money actually invested by the household, and this is entered in natural logs for easy interpretation. In the first stage, a dummy variable capturing whether a household committed any funds at all, or none, is used), ϵ is the error term, X_i represents the explanatory variables, which are briefly explained below in terms of their *a priori* expected signs, based on the literature presented in the previous chapter. The Entrepreneurship Theory followed by the literature review and the secondary data we had informed the choice of the variables below.

X₁ Age category of household head (Below 35, 35 to 65 years and above 65 years)

– In this case, a positive coefficient is expected, though with diminishing returns since younger household heads starting from some age are expected to be able to engage more in entrepreneurship, though the commitment should decline with age. Any person below 35 years of age is regarded as a youth and that only those above 18 years of age can enter a legally binding contract in Malawi.

X₂ Sex of household head – In this case, male-headed households are expected to engage more in entrepreneurship than female-headed households, because of the males' risk-taking tendencies and cultural traditions that expect males to engage more than females in entrepreneurship.

X₃ Education represented by number of years of schooling – With higher levels of education, households are expected to understand the significance of entrepreneurship on welfare. However, households with extremely high levels of education may be committed to formal employment and not engage in entrepreneurship as such, the coefficient in this case is ambiguous.

X₄ Religion of household head (Traditional, Christianity, Islam, and Others) – More generally, muslims tend to do more businesses than members of other religions. As such, households that affiliate with Islam are expected to engage more in entrepreneurship than other households.

X₅ Household size – The bigger the household, the more the people that can be used in business, hence a positive sign is expected.

X₆ Region (Central, South, and North) – With more economic activities in the southern part (hosting Blantyre, the commercial city) and central part (hosting Lilongwe, the capital city), entrepreneurship is expected to be high in these regions.

X₇ Residence (Urban and Rural) – Households in urban areas can easily engage in entrepreneurship for various products that are demanded, compared to their rural counterparts due to presence of middle-income earners, financial institutions and technological advancements in ICT and electricity.

X₈ Chronic Illness – With a chronic illness, a household spends extra funds in medical expenses, and hence may not be able to engage in entrepreneurial activities and commit funds.

X₉ Cellphone Ownership – Phone-owning households can easily access information from various platforms and hence are expected to be able to engage more in entrepreneurship.

X₁₀ Capital Source (Own Savings, Assets Sales and other proceeds, formal credit, informal loans and inherited) – Households that can gain extra funds from loans can engage and commit more to entrepreneurship.

X₁₁ Medical Insurance - With medical insurance a household is expected not to incur catastrophic health expenditures and hence expected to engage more in entrepreneurial activities.

4.2.3 Diagnostic Tests

First, the Modified Park test was conducted to identify an appropriate link and family for generalized linear models (GLM). Then, Multicollinearity and Link tests were conducted to test the robustness of the model. The three diagnostic tests have been explained in detail below.

a) Modified Park Test

Manning and Mullahy's (2001) test was methodically conducted to determine how the raw-scale mean and variance functions are related. This was done by first running the GLM, followed by predicting residuals whose squares are tested to select a particular GLM model – either the Poisson, Gamma or Inverse Gaussian (Wald).

b) Multicollinearity

Multicollinearity will always be present in non-experimental data because the data cannot be orthogonal ($R_k^2 = 0$). Multicollinearity is problematic when the variance of the estimators in a model are significantly affected by the correlation between variables such that the interaction between the variables which are supposed to be independent of each other end up obscuring the contribution of the individual variables to the fit of the regression (Green, 2002).

In theory, there are two types of extremes, Perfect Multicollinearity and No Multicollinearity while in reality, data is between these two extremes thus, multicollinearity is a matter of degree and what matters is the determination of the point when it becomes harmful (Adeboye & et'al, 2014).

The Variance Inflation Factor (VIF) is used to assess the degree of multicollinearity by showing the extent to which the variance of the estimator is inflated due to the correlation of the variables (Gujarati, 2003). A higher value of VIF, indicates multicollinearity problem and VIF is given by the formula below:

$$\text{VIF} = \frac{1}{1-R_k^2}$$

(7)

Multicollinearity is a problem where VIF is greater than 10 and this is observed when $R_k^2 > 0.90$

c) Link Test

The Link Test was used to test model specification. In this test, we regressed the dependent variable of the original regression against the original regression's prediction and the squared prediction. We then carried out test of significance to verify if the squared prediction regressor in the test regression is non-significance to satisfy ourselves that there were no additional independent variables that required inclusion in the model hence the model was properly specified (Pregibon, 1980).

CHAPTER FIVE

RESULTS AND DISCUSSIONS

5.1 Introduction

This section presents both descriptive and econometric results. Descriptive results of data from IHS4 have been presented in tabular form using totals and percentages. This section also contains econometric results of data collected from IHS3 and IHS4. Furthermore, the section provides a detailed interpretation of the results, which will inform the conclusion, recommendation and policy implication sections.

For descriptive statistics, percentages are presented in brackets in the tables in the subsequent sections while frequencies are before the brackets/percentages. In this case, entrepreneurship is presented as a dummy of whether an enterprise committed any funds at all, or not

5.2 Descriptive Statistics

5.2.1 Entrepreneurship and Sex of Household Head

Out of a total of 313 households that reported no cases of entrepreneurship, about 241 (77 percent) were male-headed while 72 (23 percent) were female-headed. For the 2,350 entrepreneurial households, up to 1,815 (77.23 percent) were male headed and 535 (22.77 percent) were female-headed. The results show that more male-headed households were engaged in entrepreneurship in comparison to female-headed households. This could be because males are perceived to be more risk-taking compared to their female counterparts and have access to more resources than females.

5.2.2 Entrepreneurship and Education of Household Head

In Table 2 below, PSLC, JCE MSCE, and Uni represent the different levels of educational qualifications of the household heads, in terms of the Primary School Leaving Certificate, Junior Certificate of Education, Malawi School Certificate of Education and University level education respectively. These educational qualifications are tabulated against the state of entrepreneurship, as follows:

Table 2: Entrepreneurship and Education

Level of Education	Households with entrepreneurship		Households without entrepreneurship	
	Frequency	Percent	Frequency	Percent
None	2,134	90.81	302	96.49
PSLC	90	3.83	3	0.96
JCE	52	2.21	2	0.64
MSCE	44	1.87	3	0.96
Non- Uni Degree	18	0.77	2	0.64
Uni Degree	12	0.51	1	0.32
Total	2,350	100	313	100
Pearson Chi-square = 12.4407 Pr = 0.029				

Out of 313 households that reported no entrepreneurship, 302 (96.49 percent) of household heads had no education at all while those that reported entrepreneurship, 2,134 (90.81 percent) out of 2,350 household heads had no education. This distribution simply shows that entrepreneurship (committing funds to an enterprise) is not highly developed among Malawian households. Yet still, it can be observed that households that reported entrepreneurial activity were more educated than their non-entrepreneurial counterparts who cannot organize and invest resources in an activity with the purpose of making a profit which is consistent with the findings of Sofoluwe (2013).

Overall, the Pearson chi-square value of 12.44 is statistically significant at the 5 percent level of significance signaling that education attainment may be important in stimulating entrepreneurship.

5.2.3 Entrepreneurship and Region, Residence and Business Registration for Household

There are three regions in Malawi, namely: Northern, Central and Southern. Demographically, the Southern Region is more populated followed by Central and lastly the Northern. Table 3 below shows disparities in entrepreneurship based on location or residence of the household, considering the urban-rural disaggregation which is consisted to the findings by Nagler (2014).

Table 3: Entrepreneurship by Region and Residence of Household

	Frequency	Percent
North		
Urban	257	47.5
Rural	284	52.5
Total	541	100
Centre		
Urban	273	38.18
Rural	442	61.82
Total	715	100
South		
Urban	299	27.33
Rural	795	72.67
Total	1,094	100

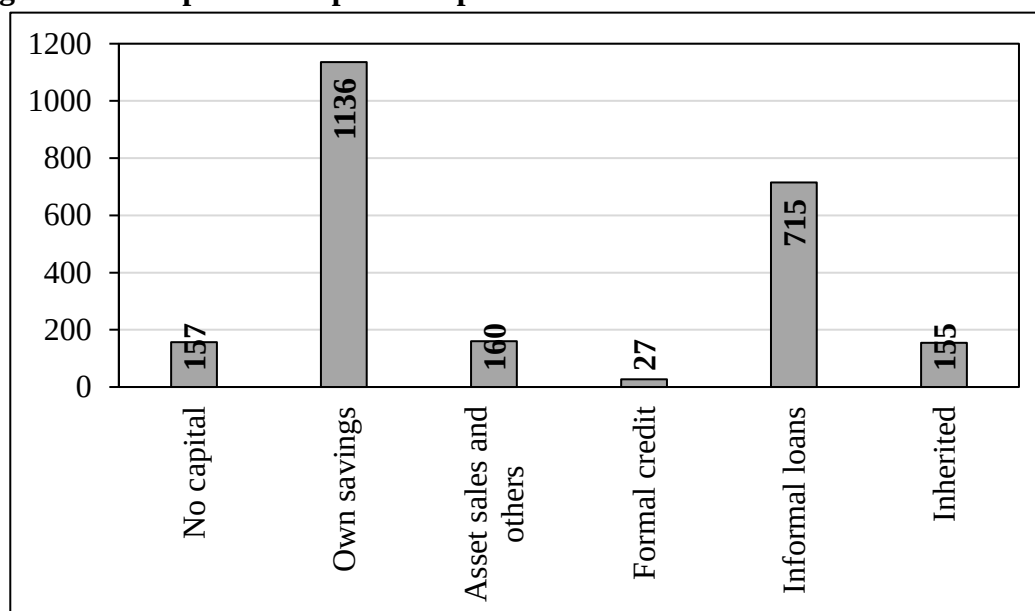
The table shows that the northern region had the lowest number of households 541 (23 percent) out of a total of 2,350 with entrepreneurial activity followed by the central region 715 (30.43 percent). Furthermore, results in the table shows that out of all households that reported some form of entrepreneurship, the highest proportions are for rural areas which could be attributed to the high population and agribusinesses in rural areas compared to urban areas. For example, while about 38.18 percent of entrepreneurial households in the central region were in the urban

areas of the central region, up to 61.82 percent of the households in the central region were in the rural areas. It is observed that while the highest number of households with entrepreneurial activity is in the southern region, the lowest is in the north. The high number of households with entrepreneurial activity in the southern region could be attributed to the availability of more economic activities in the southern region which also harbors the commercial city of the country.

5.2.4 Entrepreneurship and Capital Source

Access to capital in terms of availability and its cost is very essential for one to engage in entrepreneurship. Figure 4 below shows the different sources of capital for the households engaged in entrepreneurship.

Figure 4: Entrepreneurship and Capital Source



The figure shows that own savings was the main source of capital with a frequency of 1,136 (48.34 percent) households out of a total of 2,350 households that were engaged in entrepreneurial activity followed by informal loans at 715 households, representing 30.43 percent of entrepreneurial households. The use of own capital could be indicative of the level of development of our financial sector and the results are consistent with the Finscope MSME Malawi Survey of 2019.

5.2.5 Entrepreneurship and Age Category

Table 4 represents a cross-tabulation of the state of entrepreneurship and age categories.

Table 4: Ownership of Entrepreneurship by Age

Age Category	Frequency	Percent
Up to 35	930	39.57
35 to 65	1,286	54.72
Above 65	134	5.70
Total	2,350	100

The age category of 35 to 65 had the highest number of respondents, 1,286 (54.7 percent) that participated in entrepreneurship followed by the age group of respondents up to 35 with 930 respondents (39.57 percent). This observation could be due to the fact that individuals usually get financially stable around the 35-65 bracket. Beyond 65, most people usually retire and are therefore not involved in many economic activities and the results are consistent with Finscope (2019).

5.3 Econometric Results

Parameters of the two-part model were estimated with a probit in the first part for the status of entrepreneurial activity (8474 and 2663 households for IHS3 and IHS4 respectively) and a GLM with the log link and inverse Gaussian (Wald) distribution in the second part for only those households that practise entrepreneurship (1,807 and 2350 households for IHS3 and IHS4 respectively) as shown in the tables for econometric results in the subsequent pages. This was chosen after conducting the Modified Park test. As earlier on stated, the analysis was done at household level and to ensure reliability of the econometric results, we firstly analysed data from IHS4 then compared the results to the ones that were obtained from the econometric analysis of data from IHS3.

We have provided a detailed interpretation of the econometric results of the data from IHS4 since the study focused on the recent data. The results from the two sets of data have been presented in one table for better comparison.

For age, sex, region, residence and source of capital for the household head

respectively, benchmark categories used are age below 35, female, northern region, urban, and own savings respectively.

The table below shows the marginal (or incremental) effects for the combined Probit and GLM versions of the two-part model (Two-PM).

5.3.1 Diagnostic Tests

Various diagnostic tests were employed to check the credibility of the results from the IHS4 data. The most important of these, to the two-part model, are presented below:

5.3.1.1 Modified Park Test

Before running the two-part model, the Modified Park test was conducted as specified by Manning and Mullahy (2001). The results showed that the raw-scale variance is cubic in the raw-scale prediction, directing that the inverse Gaussian (Wald) model be estimated. This confirmed the need to specify the GLM in the two-part model.

5.3.1.2 Multicollinearity

The model was first checked for multicollinearity by looking at the coefficients of correlation between the regressors. For all the variables, none of the coefficients was greater than 0.8, an indication that multicollinearity is not a problem in the models. Appendix A shows the coefficients of correlation.

5.3.1.3 Model Specification

Another important test for the Two-PM is the test of model specification. This study employed the link test, whose results are presented in Table 5:

Table 5: Link Test for Model Specification

Entrepreneurshi		Std.			
p	Coeff.	Err.	z	P>z	[95% Conf. Interval]
Probit					
			6.2	0.00	[0.83531
_hat	1.2162	0.19433	6	0	1.5971]
			1.1	0.24	[-0.10239
_hatsq	0.14752	0.12751	6	7	0.39743]
			0.9	0.35	[-0.07439
_cons	0.06556	0.0714	2	9	0.20550]
GLM					
	188555.	64455.2	2.9	0.00	[62225.44
_hat	5	8	3	3	314885.5]
	74344.1	46413.2		0.10	[-16624.13
_hatsq	8	6	1.6	9	165312.5]
		20815.6	6.0	0.00	[84573.14
_cons	125371	1	2	0	166168.8]

The above results show that both parts of the Two-PM are correctly specified, with statistically significant _hat coefficients and insignificant _hatsq.

5.3.2 Econometric Results

The results below were obtained from estimations using IHS4 and IHS3 data. In this case, the marginal effects were computed with respect to both stages, hence signs might have varied with those in the first stage. Nonetheless, results from the second stage (GLM) were expected to be close to the overall marginal effects as per the theoretical underpinnings of the Two-PM model; that is, the marginal effects results are basically GLM results adjusted for the participation decision. As such, only one set of results may be easily interpreted without losing generality. In this study, the overall marginal effects were interpreted.

Table 6: Econometric Results

IHS 4				IHS 3		
	Probit	GLM	Marginal Effects	Probit	GLM	Marginal Effects
Age Category						
35 to 65	0.078 (0.074)	514591.2*** (196117)	455500.1***	-0.115*** (0.035)	34523.34** (16807)	7190.478*
Above 65	-0.296** (0.124)	990607.6* (552028)	818753***	-0.494*** (0.070)	84727.33* (49507)	10143.89
Age Squared	-	-193.3043* (105)	-170.0629*	-	-18.713** (9.218)	-3.99**
Sex of head						
Male	-0.114 (0.081)	164956.3 (154501)	144743.4	0.090** (0.040)	13216.88 (14129)	3162.386
Education (years)	0.035*** (0.010)	35117.43** (16863)	31604.09**	0.002 (0.004)	813.92 (1442.4)	183.1075
Religion of head						
Traditional	0.698 (0.599)	-127484.6 (987530)	-112118	0.359** (0.192)	-636.4434 (69144)	1270.803
Christianity	0.099 (0.149)	-18952.35 (351803)	-14471.84	0.180 (0.112)	9229.558 (42052)	2651.379
Islam	0.347* (0.187)	200496.1 (401826)	190210	0.290* (0.122)	-5099.737 (44767)	-78.39099
Other	-0.006	931805.8 (953808)	796987.2	0.386* (0.208)	-34611.33	-7849.5

		(0.447)				(68240)	
Household Size	0.029 (0.018)	-32890.46 (34934)	-28351.2	0.058*** (0.008)	5923.901** (2608)	1612.456***	
Region							
Central	-0.424*** (0.107)	26643.98 (179046)	23595.48	0.041 (0.044)	3133.701 (15331)	867.7871	
Southern	-0.361*** (0.102)	205941.3 (166840)	180437.6	0.086** (0.043)	3979.01 (14771)	1333.728	
Residence							
Rural	-0.237*** (0.085)	-252833.5* (144092)	-232683.1*	-0.570*** (0.037)	-	-	
					50010.35*** (11832)	18859.26***	
Chronic Illness							
Yes	-0.037 (0.112)	16412.39 (226251)	13580.21	0.041 (0.066)	-5541.944 (22512)	-988.4198	
Cellphone ownership							
Yes	0.379*** (0.073)	-	9020.951	-	-	-	
Capital Source							
Own Savings	-	228336.2 (262342)	200882.8	-	0.000 (.)	0.000 (.)	
Asset Sales and other proceeds	-	25139.25 (351198)	22116.7	-	9204.921 (21122)	1963.372	

Formal Credit	-	8886.231 (640362)	7817.82	-	79546 (34418)	16966.91**
Informal Loans	-	-8588.992 (273648)	-7556.319	-	-16394.05 (13715)	-3496.783
Inherited	-	50076.24 (348438)	44055.47	-	-13296.85 (19750)	-2836.162
Medical Insurance	-	-2.5987 (5.900)	-2.286211	-	-	-
Constant	1.084*** (0.229)	-70350.53 (517646)	-	-0.883*** (0.134)	25986.72 (49472)	-
Pseudo r ²	0.0777	-		0.0474	-	
LR Chi ²	151.44	-		416.61	-	
P	0.000	-		0.000	-	
N	2663	2350	2663	8474	1807	8474

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

5.3.3 Interpretation

Interpretations have been provided for only those independent variables whose estimated coefficients were significant and relevant to the objectives.

a) Education (years of schooling) of the household head

With the estimated coefficient of 0.035 for the first stage for the Probit Model, education was statistically significant and positive. This indicated that education positively affects entrepreneurship which means that the more years the household head spends on schooling, the higher the likelihood for the household head to eventually engage in entrepreneurial activities. For the second part of the Model (GLM), the marginal effect indicated that the average investment in entrepreneurial activities increased by MK31, 604.09 with an additional year of education. This finding was in line with that by Finscope (2019), and Matita and Chirwa (2009).

b) Age of Household Head

The estimated coefficient of -0.296 for Age was statistically significant and negative at 5 percent level in the Probit model. This result was like what was found using IHS3 data and implied that the probability of engaging in entrepreneurial activity decreased with age, as was found by Shane (2003). A negative coefficient of the square of age simply meant that there were diminishing returns to age. However, conditional on the entrepreneurial activity, age of household head affected the amount of investment a household head made in the business as shown in the second part of the model (GLM) where the marginal effect of age was significant and averaged MK455, 500.01 for the age groups between 35 and 65 and MK818, 753.00 for the age group above 65. In other words, being retired (above 65 years old) reduces the chances of engaging in entrepreneurial activities though the amount expended for those involved in entrepreneurial activities was much higher compared to household heads below the age of 35.

c) Residence of household head

With a statistically significant coefficient of -0.424 at 1 percent level in the Probit Model, households in the central region were less likely to engage in entrepreneurship than those in the northern region of Malawi. The same applied to the southern region with an estimated coefficient of -0.361. However, conditional

on entrepreneurial activity, there was no significant impact of region on amount of investment in the entrepreneurship. The results showed that there were lower chances for people in the central and southern regions to be involved in entrepreneurship compared to the northern region although, for the existing entrepreneurs, the region did not influence the extent of investment or expenditure made in the business. This result was in contrast with our expectation that households in the southern region were more entrepreneurial due to the existence of more economic activities, a result that was observed using the IHS3. Several factors could be attributed to this in the southern region such as poor macro-economic, limited land size for those that would like to engage in agribusiness, rising costs of living which has negatively affected the purchasing power of households, high unemployment rate, limited capital for the businesses, climate change and stiff competition in the market.

At 1 percent level, the estimated coefficient of -0.237 in the Probit Model was significant for rural based households which meant that rural based households were less likely to engage in entrepreneurship compared to urban based ones. For the second part of the model (GLM) the marginal effect of residence in rural areas was negative MK232, 683.10 which indicated that on average, household heads in rural areas spent less on entrepreneurial activities than urban-based ones. This satisfied the a priori expectation that urban households are exposed to more economic activities hence more likely to be entrepreneurial than rural counterparts and confirmed the findings from IHS3 and was in line with Nagler (2014).

d) Religion of Household Head

In contrast to belonging to other religions and with an estimated coefficient of 0.347 at 10 percent level, being Muslim was observed to be statistically significant in increasing the probability of engaging in entrepreneurship, compared to not belonging to any religion at all. For the second part of the model, the marginal effect indicated that on average, the investment in entrepreneurship by a Muslim was more by MK190,210 compared to non-Muslim. The results were consistent with the findings from the IHS3. For Malawi, the results above make sense because, in areas where Islam is heavily practiced, such as Mangochi, a lot of entrepreneurial activities are practiced. Additionally, there are several successful Malawian businesspersons of Asian origin, the majority of whom are Muslims. This result

underlines the influence of religion in shaping people's values and choices in life. Similar results were found in Thrace in Greece where the participation of Orthodox Christians at all levels of education was higher compared to Muslims who dropped from school after 12 years of schooling. With more education, Orthodox Christians became better equipped with knowledge and qualified which reduced their desire to pursue self-employment whereas the contrary happened amongst the Muslim population whose need for self-employment was stronger (Papageorgiou, 2012).

e) Cell-Phone Ownership

With a statistically significant coefficient of 0.379 at 1 percent level in the Probit Model, owning a cellphone was observed not only to increase the chances of engaging in entrepreneurship, but it also increased the average expenditure on entrepreneurial activities by MK9,020.95 in the GLM model. The importance of cellphones especially in the Sub-Saharan Africa cannot be overemphasized as they help entrepreneurs especially those in the agriculture sector to access market intelligence, inputs, capital, skills and labor which are essential catalysts for conducting agribusiness. Cellphones play a critical role in building mutual trust which fosters the establishment and strengthening of social networks or capital which forms a solid foundation for both personal and business relationship (Mehta. K, 2011). The above results are consistent with the Resource-Based Entrepreneurship Theory discussed under Section 3.2 which stipulates that financial and social capital or business connections are important for the growth and success of an enterprise. There was no comparative data and results from IHS3.

CHAPTER SIX

CONCLUSIONS AND POLICY IMPLICATIONS

6.1 Summary of the study

The low levels of entrepreneurship coupled with a high unemployment rate amongst Malawian youth motivated the scholar to conduct the study. It is widely recognized that entrepreneurship is the engine for economic growth and development of any country because of its impact on job and wealth creation, innovation, increased food production, and foreign currency earnings through exports.

A Two-Part Econometric Model was used to analyse data from the Fourth Integrated Household Survey (IHS4) from the National Statistical Office while data from the Third Integrated Household Survey (IHS3) was used to compare the results from the two surveys.

6.2 Key findings and Conclusions

The results of the study have shown that education positively affects entrepreneurship. The more years the household head spends on schooling, the higher the likelihood for the household head to eventually engage in entrepreneurial activities.

On the other hand, the probability to engaging in entrepreneurial activity decreased with age however, the amount spent for those involved in entrepreneurial activities was much higher for household heads older than those below the age of 35.

The results further showed that there were lower chances for people in the central and southern regions to be involved in entrepreneurship compared to the northern region although, the region did not influence the extent of investment or expenditure made in the business.

The marginal effect of residence in rural areas was negative MK232, 683.10 which indicated that on average, household heads in rural areas spent less on entrepreneurial activities than urban-based ones. This satisfied the priori expectation that urban households are exposed to more economic activities hence more likely to be entrepreneurial than rural counterparts,

Religion was found to influence the probability of one engaging in entrepreneurial activity. Being a Muslim was observed to be statistically significant compared to other religions.

Owning a cellphone was observed not only to increase the chances of engaging in entrepreneurship, but also increased average expenditure in entrepreneurial activities.

6.3 Policy Implications

The major outcome of this study is that education is essential for the birth of more entrepreneurs and that there should be deliberate efforts to have more Malawians spend more years on schooling to attain higher educational levels. Increasing investment in education to make it accessible to more Malawians would help to have more people spend considerable time on education and later establish businesses for economic prosperity of the country.

Entrepreneurship should be introduced to youth at the earliest stage possible as the likelihood to venture into entrepreneurship decreases as one grows older even though older people have the capacity to spend more money possibly from savings on entrepreneurship compared to the youth.

Rural areas should be provided with amenities or infrastructures and appropriate services similar to those found in urban areas to stimulate and promote the growth of entrepreneurship in rural areas.

6.4 Study Limitations and Areas for Further Research

The study was based on the head of household and not individuals as there is a possibility that a member of the household could be entrepreneurial irrespective of the status of the head of household.

The study focused on years of schooling as a determinant for one to venture into entrepreneurship and did not consider whether the type of courses pursued e.g. business management, entrepreneurship, law, engineering, accounting and medicine have an impact on the likelihood for the trainee to become an entrepreneur.

Furthermore, the study did not consider other training programmes such as internship apprenticeship, business incubation, boot camp, coaching and mentorship which are used to build the capacity of entrepreneurs.

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APPENDICES

Appendix A: Multicollinearity Test Results

	Agehh	Sexhh	class	religion	hhsiz	region	reside	chronic_illness	capital_source
Agehh	1.0000								
Sexhh	-0.1672	1.0000							
class	-0.1268	0.0608	1.0000						
religion	-0.0169	-0.0287	-0.0080	1.0000					
hhsiz	0.1407	0.1561	-0.1186	0.0167	1.0000				
region	-0.0249	-0.0560	-0.0802	0.0939	-0.0801	1.0000			
reside	0.0942	-0.0411	-0.3217	-0.0445	0.0400	0.0443	1.0000		
chronic_illness	0.0935	-0.0644	-0.0026	-0.0184	-0.0857	0.0323	-0.0101	1.0000	
capital_source	0.0628	-0.0488	-0.0264	-0.0312	-0.0873	0.0279	0.1407	0.0106	1.0000