ENTERPRISE FACTORS AND ENTERPRISE GROWTH OF THE CASSAVA INDUSTRY IN AKUAPEM-NORTH MUNICIPALITY OF THE EASTERN REGION, GHANA

BY

MBAWINI AUGUSTINE

(10403235)

A THESIS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF DEGREE OF MASTER OF PHILOSOPHY IN AGRICULTURAL EXTENSION.

LEGON

JULY, 2020

DECLARATION

I, Augustine Mbawini, do hereby declare that apart from references to the works of other authors duly acknowledged, this work is my own original study under the supervision of Dr Seth D. Boateng and Dr. (Mrs.) Jemima A.Y. Amoah. This work has not been presented either in part of in whole to any institution for the award of any degree anywhere. I, therefore assume full responsibility for any errors and omissions for the work.

… …..... DATE .....02/04/2020.....

AUGUSTINE MBAWINI

(CANDIDATE)

……..... DATE .....

DR. SETH D. BOATENG

(LEAD SUPERVISOR)

……..... DATE.....

DR. (MRS.) JEMIMA A.Y. AMOAH

(CO-SUPERVISOR)

ABSTRACT

Several factors influence the establishment, effective management and success of enterprises. These factors can be categorised under pre- and post- establishment factors and although they affect the successful establishment and growth of enterprises, much attention have not been paid to them. The failure of some businesses could be linked with non-adherence to and inclusion of the factors in the establishment process as well as management practices. Pre-establishment factors include enterprise characteristics, knowledge of fund availability, knowledge of business information, and entrepreneur's expertise whiles Post-establishment factors entail business survival objectives, sociocultural environment, business environment, and human resource development. This study sought to determine how enterprise factors contribute to the growth of enterprise and how this growth contributes to the attainment of improved livelihood outcomes in the cassava industry. A mixed method study design was used in this study. A total of 200 entrepreneurs from the cassava industry were interviewed. The study revealed that consumer need showed significant association (ρ= 0.01, 0.01 and 0.01) with employment, sales and technology growth factors respectively. The type of agro enterprise (ρ= 0.01) and access to business information (ρ= 0.03) were significantly related to technology growth. Knowledge of fund availability (ρ= 0.01) was also significantly related to employment growth. Post establishment business environment (ρ= 0.01) was significantly related to sales growth. The findings of the study revealed a significant relationship between sales growth (ρ= 0.04) variables and improved health but was not significant with employment growth (ρ= 0.25) and technology growth (ρ= 0.05). The results also showed significant relationship between sales (ρ= 0.03), technology (ρ= 0.02) and employment (ρ= 0.02) growth factors. From the findings of this study, it is recommended that there should be technology training, and education on available funding sources.

DEDICATION

This work is dedicated to my parents Mr Moro Mbawini and Mrs Alimatu Azumah, and my brother Saddique Azumah who are always there for me.

ACKNOWLEDGEMENT

I will first and foremost give thanks to the Almighty God for bringing me this far in my pursuit of academic laurels.

I wish to also express my profound gratitude to my father, Moro Mbawini, mother, Alimatu Azuma, brothers and sisters, Saddique, Muniru, Philomina, Kenneth, Simms, and my aunt, Alamisi Alhassan who have always had faith in me and came to my aid anytime I called on them.

I want to appreciate the Department of Agricultural Extension for giving me this opportunity to achieve my academic laurel. Special thanks go to my supervisors, Dr Seth D. Boateng and Dr. (Mrs.) Jemima A.Y. Amoah whose direction and supervision guided me through all the stages of this research. My sincere thanks also go to Dr.(Mrs.) Comfort Y. Freeman (Head of Department), Dr Jonathan N. Anaglo and to all the lecturers at the Agricultural Extension Department for their encouragement and guidance.

Bigger thanks also go to all the Officers of the Department of Agriculture (Akuapem-North Municipality) and cassava entrepreneurs, for their valuable contributions towards making this work a success through the interviews I conducted with them

Finally, I thank all my MPhil colleagues of the 2019 class for their useful and insightful contributions and suggestions offered for my consideration. It was a blessing to be part of this class.

May God bless you all.

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AGI : Association of Ghana Industries 7

BAC : Business Advisory Centres 6

EDAIF : Export Development and Agricultural Investment Fund 21

FINGAP : Financing Ghanaian Agriculture Project 21

GRATIS : Ghana Regional Appropriate Technology Industrial Service 7

GSS : Ghana Statistical Service 43

HRD : Human Resource Development 28

IDB : Inter-American Development Bank 26

MoFA : Ministry of Food and Agriculture 6

NBSSI : National Board for Small Scale Industries 6

R&D : Research and Development 33

SME : Small and Medium Scale Enterprises 1

SPSS : Statistical Package for the Social Sciences 49

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

Small and Medium Enterprises (SMEs) play a vital role in the growth and development of an economy as they contribute over 90% of most countries economy; hiring more than half of the workforce (Manan, 2010; Randerson, Bettinelli, Fayolle, & Anderson, 2015; Sefiani, 2013). Additionally, SMEs constitute the mainstream of enterprises in developing countries and have been shown to be one of the most significant sectors in economic and societal growth, employment, local development (Shafiei Nikabadi & Jafarian, 2012) and poverty reduction (Ayyagari, Bech, & Demirguc-Kunt, 2007). Sanders (2016) identified SMEs as the vehicles for employment and job creation and are keys to Africa's business environmental needs. SMEs and new enterprises produce around 80% of Africa's employment, creating a new middle class and driving demand for fresh goods and services (Dos Santos, 2015). Akugri, Bagah, and Wulifan, (2015) also reiterate the contributions that SMEs play in nation building, state advancement, and promoting innovativeness. Sanders, (2016) again mentions that growth in Africa's economy, development of the region; increase in socio-economic standards, and poverty alleviation cannot be achieved without SMEs. In Sub Sahara Africa, SMEs are considered to be very significant propellers to attaining national development goals such as economic growth and poverty alleviation (Acs, 2006).

From literature, cassava is the basis of a horde of products, including food, flour, animal feed, alcohol, starches for sizing paper and textiles, sweeteners, bio-degradable products (Adjouman, Nindjin, Tetchi, Dalq, Amani & Sindic, 2017; De Moura, Moursi, Lubowa, Ha, Boy, Oguntona, Sanusi & Maziya-Dixon, 2015). De Moura et al., (2015) stated that the products are derived from

a number of forms of cassava, ranging from fresh leaves and roots to modified cassava starch. They added that the degree of processing and the technical requirements tend to increase from the fresh form to the modified starch form. Gatune (2016) stated that cassava is produced mostly by smallholders on marginal and sub-marginal lands in the humid and semi-humid tropics. He added that it is forbearing to drought and can produce acceptable yields even on marginal lands, therefore can play an important role in ensuring the food security of vulnerable groups.

According, to Villars et al. (2004), SMEs contribute about 70% to Ghana's Gross Domestic Product (GDP) and constitute about 92% of all enterprises in Ghana. The Ghanaian economy is basically full of small individual businesses, Small and Medium scale Enterprises (SMEs), corporate bodies and global companies that act as a vibrant performer for the rapid development of our economy and progress, poverty alleviation and increased productivity. SMEs tend to provide the primary drive propelling job creation, they are known to be labour intensive, employing more labour per unit capita than larger enterprises thus a major employer in the economy. This is evident in a developing country like Ghana where the SMEs sector employs an estimated 35% of labour (Mensah, 2004) an in Europe where SME's employ about two third of the workforce (Prempeh, 2015). Again, according to Sowa and Zachman, (1992), SMEs provide a beneficial complement as a second job for some people employed in the public sector. Thacker et al., (2019) stated that SME sector provides investment opportunities, favourable conditions for the development of infrastructure and provision of other amenities such as water, roads and electricity as part of their influence on rural development.

Akugri et al., (2015) opined that SMEs are noted for empowering citizens and promoting economic growth. They provide an avenue for the stimulation of development in most countries through the promotion of entrepreneurial initiatives and business skills amongst communities (Ceglie & Dini,

1999). For instance, in South Africa, SMEs account for about 46% of the total economic activities of private employment. It is also estimated that about 80% of the formal business sector and 95% of the total business sector are SMEs (Volkery & Jacob, 2004).

The contribution of small businesses established and managed by Ghanaians towards the growth of the Ghanaian economy cannot be ignored. According to Schaper, (2002) countries that have made significant economic advancement in recent years demonstrate undoubtedly that development of entrepreneurship is the backbone of economic growth and development. Schell and Story (1993) also noted that in developed countries like the United State of America, USA, where big corporations are dominant, SMEs still play a vital role in the growth of their economy.

There is a need to consider and understand the factors that promote and lead to the growth of these enterprises. Growth in these industries will have an impact on the standards of living, quality of life and economic growth of the continent. For the purpose of this study, the focus is on the agricultural sector, specifically the cassava industry.

Before an enterprise is established, there are factors (pre establishment) that exist and they affect the type of enterprise to be established (Processing or Production enterprise). The pre-establishment factors are the entrepreneur's expertise, characteristics of the enterprise, knowledge of funds availability, and business information (Agbe, 2015; Boateng & Agbe, 2018). The proper identification and management of the pre establishment factors lead to the creation of viable businesses or enterprises. Post-establishment factors are the assets and processes of small trades; skills and knowledge that are possessed by the owner and personnel of small businesses; planned approach and orientation of small business; the degree of sophistication of planning; and the nature of external environment that affect an existing enterprise (Tur-Porcar, Roig-Tierno, & Mestre,

2018; Khan, Alam, & Khan, 2005; Janeska-Iliev & Debarliev, 2015). For the purpose of this study, post establishment factors are business survival objectives, human resource development, socio-cultural environment, and business environment.

The post-establishment factors are managing a business or an enterprise for its growth. The growth of an enterprise deeply depends on the factors that led to its establishment and the management practices employed (Koech, 2011).

In the agricultural sector, production, and value addition to agricultural produce is vital for agricultural and rural development. Growth in agribusiness and agro-industries in Ghana is fundamental to the process of agricultural transformation and the pursuit of the national agenda in attaining the status of an agro-based industrialized economy. The agricultural industry is characterised by a broad spectrum of activities including production, retailing, processing, exporting and marketing. Growth in agricultural enterprises will be characterized by increase in the number of people employed in the sector, increase in the supply of products resulting in the increase in sales volume of the enterprises, and the advancement in technology usage. Improved livelihood will be categorised by ability to afford Agricultural Extension Services, improved health, and improved social capital. Aryeetey and Ahene (2005) also noted that for wage employment and economic development the agro industry is the way to go.

1.2. Study Context

The Small and Medium Enterprise (SMEs) are defined in diverse ways based on the country of residence with no universally accepted definition. Special Indicators such as their total revenue terms and the number of employees is used to define Small and Medium Enterprise (SMEs). According to the Commission of the European Union, (2003), SMEs are described as companies with a maximum of 250 staff and an annual turnover of not more than EUR 50 million. There is a

difference between micro-enterprises (less than 10 people and 2 million euros in turnover) and macro-enterprises (less than 50 employees and less than 10 million euros in turnover). The National Board for Small-Scale Industries (NBSSI), which is Ghana's legislative body for SMEs, describes SMEs in terms of both fixed assets and the number of employees. It defines an SME as a business with a turnover in excess of US$ 200, 000 (GH₵ 1.8 million at a rate of US$ 1 to GH₵ 5.40) and not more than the equivalent of five million dollars. Small companies are the engines of any economy's growth and development, generating employment and earnings, stimulating competition, creating innovation sources, and creating company opportunities (Aguirre, Lagunas, Rodríguez, & Campbell, 2019)

1.3. Problem statement

Some researchers have observed that 50% of well-structured enterprises could only survive after five years (De Kok, 2011) and this is attributed to factors such as inadequate business information, poor management skills, poor marketing skills and poor corporate governance (Fjos, Grunfeld, & Green, 2010; Mbugua, Mbugua, & Wangoi, 2013; Wong & Merrilees, 2005). Mbugua et al. (2013) identified that inadequate finance affects the employment growth of enterprises.

Kruger, (2004) and Hosseininia and Ramezani (2016), observed that most researchers analyse the growth of enterprises from the perspective of post-establishment factors. However, from literature, pre establishment factors do contribute to the growth of enterprises (Agbe, 2015; Boateng & Agbe, 2018). For instance, Boateng and Agbe (2018) observed that pre establishment factors do not only influence the entrepreneurial or enterprise establishment process but also contributes to the employment growth of the pineapple industry in the Nsawam-Adoagyiri Municipal District. In addition to that Agbe (2015) found out that pre establishment factors such as access to business

information and fund availability have an influence on the technology and employment growth of SMEs. Enterprise growth may include employment growth, sales growth, and technology growth.

Since both the pre and post establishment factors contribute to the growth, it is important that the two broad factors are investigated in research. Growth of enterprises and for that matter SMEs, always have an influence on the livelihood outcomes of entrepreneurs (Anaglo, Freeman, Kumah, & Boateng, 2014; Gyenfie, 2014). Anaglo, et al. (2014) showed that farmers who used technology growth for fish farming were able to afford their children's school fees (livelihood outcomes). Gyenfie, (2014) reported that entrepreneurs (farmers) who adopt knowledge, attitude and practices from Agricultural Extension Trainings are able to grow their businesses and ultimately improve their livelihoods. Though Ministry of Food and Agriculture (MoFA), National Board for Small Scale Industries (NBSSI), and other Business Advisory Centres (BAC) reach out to entrepreneurs with several interventions to attain growth, there is very limited improvement in their livelihood outcomes and therefore the need for this study.

Post establishment factors are services provided by Agricultural Extension Agents (AEAs), other development organizations and the entrepreneurs themselves to manage and grow their enterprises. The properties and processes of the enterprise; skills and knowledge of the entrepreneur and employees; strategic method and orientation of SMEs; the degree of complexity of planning; and the nature of external environment are some Post establishment factors that influence growth (Tur-Porcar, Roig-Tierno, & Mestre, 2018; Khan, Alam, & Khan, 2005; Janeska-Iliev & Debarliev, 2015). Most entrepreneurs credit their success to previous work experience and knowledge of the business, social networks, and educational background (Nitcher and Goldmark, 2005). The NBSSI, the Association of Ghana Industries (AGIs), Ghana Regional Appropriate Technology Industrial Service (GRATIS) Foundation and Agricultural Extension Agents (AEAs) are some organizations

that provide information and skill services to SMEs. Limited research has been done to document the contribution of (SMEs) enterprise factors (including pre and post factors) to the growth of industries especially the individual contributions of pre-establishment and post-establishment factors.

The purpose of this research is to analyse the contribution of enterprise factors to the growth of the cassava industry and how it leads to the improvement of the livelihood outcomes of entrepreneurs of this industry in the Akwapim-North Municipality in the Eastern region as a situation study.

1.4. Main Research Question

How do pre and post establishment factors contribute to the growth of the cassava industry and what impacts does enterprise growth have on the livelihoods of entrepreneurs?

1. How do enterprise factors contribute to the growth of the Cassava industry in Akuapem-North Municipality?

2. What are the contributions of enterprise factors to sale growth of Cassava enterprises in the Akuapem-North Municipality?

3. What are the contributions of enterprise factors to technology growth of Cassava enterprises in the Akuapem-North Municipality?

4. How does growth influence the livelihoods of entrepreneurs of the cassava industry in the Akuapem-North Municipality?

1.5. Research Objective

The main objective is to determine how pre and post establishment factors contribute to the growth of the cassava industry and the impact growth have on the livelihoods of entrepreneurs.

1.6. Specific Objectives

1. To determine the contribution of enterprise factors to employment growth of Cassava enterprises in the Akuapem-North Municipality.

2. To determine the contribution of enterprise factors to sale growth of Cassava enterprises in the Akuapem-North Municipality.

3. To determine the contribution of enterprise factors to technology growth of Cassava enterprises in the Akuapem-North Municipality.

4. To assess how growth influences the livelihoods of entrepreneurs of the cassava industry in the Akuapem-North Municipality.

1.7. Justification of the Study

The study looks into the pre and post establishment factors associated with the establishment and management of enterprises and their contributions to the growth of agro enterprises. It will create an understanding of enterprise performance in terms of growth which will lead to improvement of the livelihood outcomes of the entrepreneurs involved. Also, agro enterprises play a vital role in the development of the country in the area of job creation and food security. Research into its growth would help in the formulation of a more defined targeting strategy by investors, government, and development experts to combat the problems in the agricultural sector, check unemployment, and avoid investing blindly. The study would also contribute to knowledge in the

areas of pre and post-enterprise factors and growth and provide a further understanding of how growth in the cassava business affects livelihoods.

1.8. Outline of the study report

Chapter One looked at the background of the study, the setting in which the study was carried out and the problem statement. It also stated the research questions, the objectives of the study and the relevance of the study. Literature and theories underpinning the study are reviewed in Chapter Two. The conceptual framework of the research, the importance of SMEs to national development, policies and programmes of the government for enterprise development were also discussed in Chapter Two. Chapter Three explains the methodology, the techniques used, and how information was gathered and analysed. Chapter Four presents outcomes and findings and these results with respect to existing literature. Chapter Five presents a summary of recommendations based on findings of the study, draws conclusions and makes suggestions for further study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter focuses on the theoretical reflections of the study and observes identified theories underpinning the problem under investigation. This chapter discusses the conceptual framework of the study, the concept of agro-enterprises, concepts of enterprise establishment process (pre and post establishment factors), theories of enterprise establishment, theories of enterprise growth, factors of enterprise establishment, factors of enterprise growth, enterprise growth and the definition of various concepts used in the study. The importance of SMEs to national development, government policies on SMEs in Ghana and the cassava industry in Ghana are further discussed in this chapter.

2.1. Conceptual framework

Every enterprise is affected by two factors. These are pre-establishment and post-establishment factors. The pre-establishment factors are those that propel the start of a particular enterprise (production or processing). These enterprises after they have been established are faced with other factors which either help them grow or suppress their growth. Pre-establishment factors involve the expertise of the entrepreneur, knowledge of funds availability for the enterprise's establishment, and access to funding (Aryeetey & Ahene, 2005; Thacker et al., 2019). Entrepreneurs go through the following process to establish an enterprise; recognising an opportunity, looking for information and learning, mobilizing resources, and selecting the enterprise strategy (Agbe, 2015). The pre-establishment factors are derived from two theories which are the discontinuity theory of enterprise establishment and the theory of previous organizational background.

According to Bull et al. (1995), a new blend causing discontinuity will be created, that is entrepreneurship will take place when there is a situation of task-related motivation with the expectation of self-gain and a supportive environment. The factors or variables identified in the discontinuity theory include the basic task identified, the characteristics of the enterprise, the expertise of entrepreneur, and a supportive business environment. The basic task motivation identified in the discontinuity theory of enterprise establishment is referred to as the characteristics of the enterprise in this research. These include the type of enterprise operated by the entrepreneur and customer needs that products meet (Bull *et al*., 1995).

The second is the theory of previous organizational origin which states that "occupation, previous educational background and information source have a significant impact on the choice of an individual to start a new enterprise and the features of the new enterprise" (Schoonhoven & Romanelli, 2001). Many researchers have pointed out several relationships that exist between an individual's knowledge or expertise in enterprise establishments such as their educational background, and previous work (Ardichvili, Cardozo, & Ray, 2003; Blanchflower, 2004; Uhlaner, van Goor-Balk, & Masurel, 2004). The expertise identified in both theories would be investigated using the educational background and previous work experience of the entrepreneur.

Enterprise characteristics (the type of enterprise and customer needs), knowledge of funds availability for enterprise establishment, business information (access to business information and business information sources), and expertise (expertise from an educational background and previous work background) are the variables acknowledged for enquiry in this study. These variables are referred to as pre-establishment factors. These factors augment the enterprise establishment process and include these steps; opportunity recognition, information seeking and

learning, resource acquisition, and enterprise strategy selection which is likely to affect the growth of the enterprise.

The post-establishment factors are those that affect the enterprise after it has started operation. Some post establishment factors identified from literature include the financial environment, legal environment, government policy and programmes, business information environment, small business resources and procedures ; the abilities and understanding of small business owners and staff; the strategic strategy and orientation of limited companies ; the degree of scheduling sophistication ; and the nature of the external setting; (Tur-Porcar, Roig-Tierno, & Mestre, 2018; Khan, Alam, & Khan, 2005; Janeska-Iliev & Debarliev, 2015). This study identified four factors that are of immediate relevance to the agro industry. These are business survival objectives, business environment (policies and programmes), socio-cultural environment, and human resource management.

Enterprise growth is viewed as the scale increase in the number of employees, sales volume, and improvement in technology (Moreno & Casillas, 2007). These are However, referred to as employment growth, sales growth, and technological growth in this study. Moreno and Casillas highlighted that employment growth is considered as the change in the number of employees, and sales growth is regarded as a change in the sales volume of the product (cassava, cassava dough, and gari). Technological growth is defined as the advancement or improvement in the usage of technologies ranging from manual use of technology to mechanical technology (Agbe, 2015).

Anaglo, et al. (2014) stated that enterprise growth allows entrepreneurs to improve their livelihoods and live better lives. They further explained better enterprise factors help entrepreneurs to increase their yield, improve their use of technology, improve health, increase the number of

employees, enable them to afford their children's school fees, improve on their social capital, acquire household appliance and live a food secured life. Figure 1 below shows the various concepts and the links between them in the study.

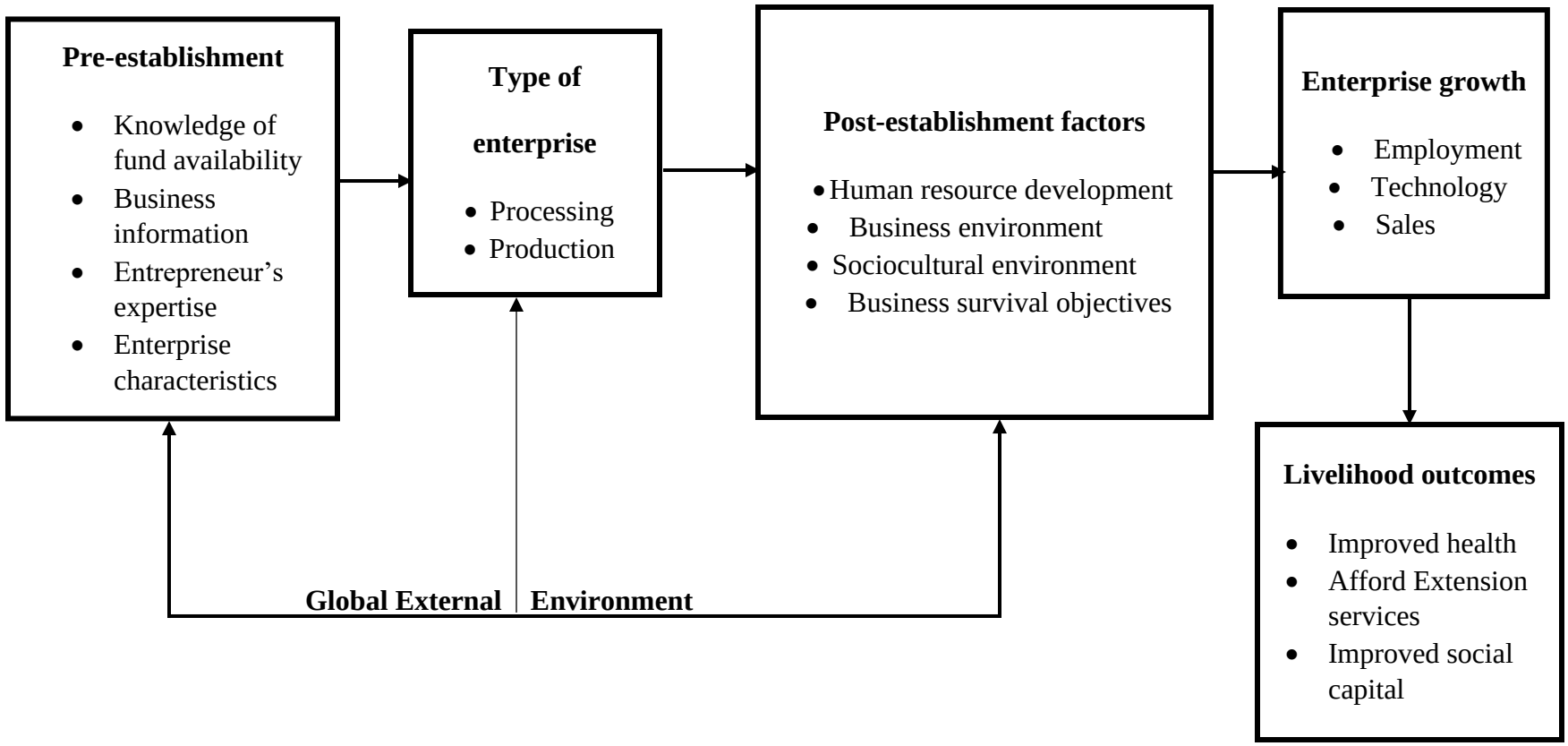

Figure 1 Conceptual Framework of the Study (Adapted from (Boateng et al., 2018))

2.2. Agriculture as a business

Agriculture is the science or practise of farming, including the cultivation of crops and the rearing of animals for food, wool, and other products. According to Kahan (2013), agriculture is mainly considered by entrepreneurs for one of the following four reasons;

i. Domestic consumption with seldom surpluses. These entrepreneurs will usually sell on the market if there is a surplus, but it is very rare. These entrepreneurs often find themselves and their families struggling with basic survival. They usually lack health, water, food, shelter, and security. They are seldom able to dedicate their minds and bodies to entrepreneurial responsibilities. Though they may be entrepreneurs inwardly, they mostly lack the opportunity to farm as such.

ii. Domestic consumption with the purpose to sell surpluses on the market. These entrepreneurs produce above and beyond what they need for survival. They have a greater appreciation of the market and have spent some economic activities on their survival farming. They are just beginning to develop profit-driven farming enterprises. These entrepreneurs still regard their farms as enterprises. Investment over the long term is not yet a priority. They hesitate to diversify to higher-value products. They are comfortable selling food surpluses. The transfer to cash crops is usually too extreme and entails risks that they are not prepared to accept.

iii. Market and home consumption. These entrepreneurs understand the market value of agriculture but are often restricted by access to finance, labour or market information. Though the market value elements are all present, they cannot risk the needs of their families without greater certainty of cash crop income. The choice between producing primarily for the market with certain products used for home consumption or mainly for

home consumption with certain products sold on the market depends on their circumstances and their willingness to take a risk.

iv. Production for the market. Entrepreneurs are completely market-oriented. Their main reason for agriculture is profitability by producing for the market. Entrepreneurs need more farm management and entrepreneurial skills to be successful in market-oriented farming.

The first three reasons for farming are common among entrepreneurs who see agriculture as a way of life. These entrepreneurs create a way of life in order to meet basic food needs with less emphasis on market opportunities. They usually engage unpaid household labour.

The fourth category are those who view agriculture as a business. This type of agriculture uses business principles to achieve profit. These business principles include forecasting, planning, organizing, managing, coordinating and controlling (Longenecker, Petty, Palich, & Hoy, 2013; Stokes, Wilson, & Wilson, 2010). Forecasting and planning involve the development of a business plan for the farming industry to anticipate future market demand and also develop demand- satisfying strategies. The organization involves the acquisition of materials and human capital in order to achieve the objectives of the agricultural business. The entrepreneur must set up the business in a way that will maximise the chances of realising the desired optimum results from subordinates, secure an orderly group effort pattern among their staff through the unity of action in order to achieve the common goals and ensure that everything is done in accordance with the rules and instructions given to the workers. All these business principles can be used in the entire value chain in all types of agriculture.

2.3. The nature of agro-businesses

Agro businesses provide value-adding goods and services and take title to inputs and/or outputs within the agro-food system (Jaffee, Kopicki, Labaste, & Christie, 2003). These agro-enterprises

produce and sell contributions to entrepreneurs, process and/or method plants and animal goods, wholesale and retail fresh and processed goods and/or sell raw materials to customers. These companies can be located in rural or urban geographical areas. They can be micro, small, medium or large, private or public, domestic or foreign, or a mixture.

Agro-businesses can be companies, cooperatives, family-run units or single ownership and are therefore overseen by a variety of regulations. Their technology and specialities are different. Although often equated with "big enterprises," most agro-enterprises are small distinct mediators (i.e. traders, carriers) and micro initiatives from the informal sector.

They are established by individuals or groups of people through entrepreneurial processes or enterprise establishment processes. Therefore, it is imperative to comprehend the concept of enterprise establishment in order to improve the discussion of agro-business.

2.4. Concept of enterprise establishment

Hisrich, Robert, Peters, and Shepherd (2005) defined entrepreneurship as “the process of creating something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic, and social risks, and receiving the resulting rewards of monetary and personal satisfaction and independence”. The definition prescribes four basic facets of being an entrepreneur irrespective of the field. These are;

i. Entrepreneurship involves the creation process – creating something new of value
ii. Entrepreneurship requires the devotion of the necessary time and effort
iii. Assuming the necessary risks and
iv. The expectation of reward.

The process of setting up an enterprise occurs at different stages and events that follow one another (Reynolds, Bygrave, & Autio, 2004; Westhead & Wright, 1999). Nassif, Ghobril, and Silva (2010) summarised the stages of the entrepreneurial procedure as; the idea or commencement of the business, the incident that triggers the operations, execution and growth. Kruger (2004) indicates that the enterprise process is built on a four-activity cycle; Innovation, an event that triggers, implementation and growth. He also stated that various variables cooperate with the environment during the cycle to impact the entrepreneurial procedure. Kruger argued that from an activity-based perspective, the "triggering event" could possibly be replaced by "launching or start-up" and that growth would be seen more as an outcome/result of activity "exploitation of opportunity".

Literature shows that the process of establishing enterprises depends on the ability of the entrepreneur and the interactions within the socio-economic and socio-cultural environment (Aldrich & Cliff, 2003; Delanoë, 2013). Delanoë (2013) identified that pre-stating entrepreneurial preparation is a valuable tool for enhancing entrepreneurs' skills in starting a project or enterprise. Aldrich and Cliff (2003) found that the characteristics of the family system (transitions, resources, standards, attitudes, and values) may facilitate or impede individuals' initiative to start their own business.

2.4. Theories of enterprise establishment

There are different theories that highlight the establishment of firms. These include the discontinuity theory of enterprise establishment (Bull et al., 1995), the theory of the previous organizational origin and ethnic minority theory of enterprise establishment (Schoonhoven & Romanelli, 2001). When it comes to this study two of the theories the discontinuity theory and the theory of previous organizational origin are discussed.

2.4.1. Discontinuity theory of enterprise establishment

Bull et al., (1995) proposed that a new blend, causing discontinuity will be formed, thus, entrepreneurship happens under conditions of task-related motivation, expertise, the expectation of gain for self and a supportive environment. The theory is that the entrepreneur must identify the product or service that meets the needs of society. The entrepreneur must be able to acquire the necessary expertise to deliver the identified product or service through his own skills and abilities or acquire the necessary expertise through the engagement of employees. The entrepreneur, therefore, believes that he or she can start and complete initiatives through his or her own actions (Virtanen, 2004).

The entrepreneur must also expect gains or benefit from the delivery of the product or service. Virtanen (2004) identified that the main expectation and objective of an independent worker may be to employ him or herself and enjoy decent incomes and living standards. The firm according to the theory of discontinuity must operate in a supportive business environment. The business environment here is defined as a set of policies, institutions, support services and other conditions that collectively improve or create a general business environment in which companies and business activities can start, develop and grow (Christy, Mabaya, Wilson, Mutambatsere, & Mhlanga, 2009). The environment shapes business costs and risks, hence the competitiveness of an enterprise and its ability to create value (Konig, Da Silva, & Mhlanga, 2013).

The factors or variables identified in the discontinuity theory include the basic task identified (the type of enterprise and customer needs that products meet), the expertise of the entrepreneur, knowledge of fund availability, business information, human resource development, business survival objectives, sociocultural environment, and business environment.

2.4.2. Theory of previous organizational origin

The theory of previous organizational origin states that occupation, previous educational background and information source have a major influence on an individual's decision to start a new company and the characteristics of a new venture (Schoonhoven & Romanelli, 2001). Information relating to something we already know is normally easy to comprehend (Von Hippel, 1994). Shane (2000) thus proposed that entrepreneurs should discover opportunities because the attraction of new information is caused by prior knowledge. The variables obtained from this theory are expertise from previous educational background and expertise from previous work.

From the two theories of the establishment of an enterprise, it can be identified that certain necessary conditions must be taken into account for the creation of a new company. These are the identification of a societal need, the entrepreneur's expertise and business support services (funds availability and business information). These conditions are described as factors that influence the enterprise establishment process which is discussed in the following section.

2.5. Factors influencing enterprise establishment process (pre-establishment factors)

These are factors that influence the different stages or activities of the process of setting up an enterprise. These include the type of company (task), the entrepreneur's expertise and the supportive business environment (Boateng & Agbe, 2018). These factors are discussed below;

2.5.1. Type of enterprise and enterprise growth

The needs of society are numerous and growing, even so customers, employees and new generations of young people require enterprises to play their part in meeting these needs. In this regard, companies must design types of products and services that meet society's needs. Enterprise type refers to the fundamental social needs identified by the entrepreneur or the business unit (Gibb, 1993). In order to make economic gains, the company must acquire a certain level of

acceptance from society and its stakeholders. The type of enterprise depends on the pre-establishment factors, educational background of entrepreneur, work experience, knowledge of fund availability, influence of the individual to either establish a production or processing enterprise and the consumer that should be met.

2.5.2. Supportive business environment and enterprise growth

The supportive business environment is defined as a world of opportunities and incentives within the locality of the enterprise that supports growth (Nitcher & Goldmark, 2005). Such incentives include good and enabling tax regulations and laws that promote growth and economic development of the enterprise. According to Bull et al. (1995), the entrepreneur uses an infrastructure that other companies have developed substantially at the onset of the enterprise to get operations running.

National and regional governments have pursued policies to facilitate entrepreneurship and encourage their people's entrepreneurial spirit (Chang et al., 2010). Nitcher and Goldmark (2005) stated that the overall economic situation has an unswerving impact on the availability of profitable occupational opportunities. According to them, this includes a stable macroeconomic environment, the existence of contract administration and dispute resolution mechanisms, uninhibited capital flows for foreign and domestic investment, labour laws, access to information and education and technology investment. A number of developing countries have recently drafted SME legislation and launched programmes to support small and domestic businesses (Acs & Audretsch, 2010). In Ghana, the Export Development and Agricultural Investment Fund (EDAIF) were established by Act 823, the Private Sector Development Strategy II and FINGAP policies and programmes designed to create a supportive environment for the establishment and development of small and medium-sized businesses

According to Holcombe (2003), everyone has information unique to their own activities and if the economic system encourages everyone to operate on the specific expertise they have, it will be the most productive economy. He argued that the availability of entrepreneurial opportunities makes entrepreneurs more vigilant. Entrepreneurs in any country or economic environment are affected by the availability and access to finance, business information, legal environment and other economic fundamentals, including macroeconomic stability, infrastructure and the level of expansion of their financial markets (Abor & Biekpe, 2006; Acs & Audretsch, 2010; Mullineux & Murinde, 2014). The next section deals with two main factors of the business environment, namely the financial environment and the business information environment.

- **Financial environment and enterprise growth**

Mullineux and Murinde (2014) identified the financial sector as a debt and equity financing allocator and as a key player in enterprise development. In most African economies, banks continue to be the main source of external capital for both large and small businesses, as well as the private sector and the economy in general. However, Nitcher and Goldmark (2005) noted that SMEs appeared to face higher financial restrictions than larger companies, ranging from inadequate equity to partiality against small companies. In sub- Saharan Africa, the majority of small enterprises fail in their first year due to lack of government and traditional bank support (Biekpe, 2004). In Nigeria, for example, government support for the development of SMEs has not made a substantial contribution (Ekwem, 2011). He also identified the lack of entrepreneurial financing as a factor leading to multiple problems and that the main credit sources available for financing small and medium-sized enterprises in Nigeria are personal savings, family and friend support and commercial banks.

Poor access to finance and other start-up capital is a challenge for new entrepreneurs (Global Business School Network, 2013). A study in Ghana showed that the awareness and use of various financial initiatives among small and medium-sized enterprises in the country are low (Abor & Biekpe, 2006). They explained that most financial arrangements are difficult to access.

Robinson and Kolavalli (2014) have identified certain incentives to attract agro-processor investors as part of an attempt by the Government of Ghana to develop a link between agriculture and industry and to improve export income. These include a tax exemption for certain manufacturing and agribusiness sectors and lower rates depending on the market, and less factory taxes in other regions or rural areas than in the city of Accra-Tema.

- **Business information and enterprise growth**

The spread of knowledge and information will particularly be helpful if there are high transaction costs for discovery or large asymmetries of information (Acs & Dana, 2003). Knowledge is important in the product and production discovery process. According to Eckhardt, Ciuchta, and Carpenter (2018), there are also high costs to find out what to produce, and that these costs cannot be fully appropriated by an entrepreneur. They, therefore, require the involvement of government and Non- Governmental Organizations (NGOs) in the provision of such information and knowledge.

A potential entrepreneur also monitors existing entrepreneurs' strategies and business operations to collect information on potential markets, input suppliers and production techniques (Acs & Audretsch, 2010). Acs and Audretsch (2010) indicate that knowledge and information externalities have two important implications for entrepreneurship in developing countries, these are discovering what to produce and the processes that should be used.

2.5.3. Entrepreneur's characteristics and enterprise growth

The individual entrepreneur is the most important element in the establishment of the company. The individual(s) recognized the opportunity, conceived the idea, sought relevant information on the identified opportunity, learned skills and methods related to the mobilization of resources by the enterprise, selected relevant strategies for the enterprise and developed a new combination (enterprise). Therefore, the process of establishing a new enterprise is inherently an individual phenomenon. There are no organizations without the creation of individuals (Acs & Audretsch, 2010).

The entrepreneur's definition is a research problem (Bruyat & Julien, 2001). They concluded that the entrepreneur is the person responsible for the process of creating new value (an innovation and/or a new organization), that is the person without whom the new value would not be created. Bruyat and Julien (2001) further stated that, based on the assumption that the individual entrepreneur is responsible for the process, he/she must have certain characteristics and skills to undertake the process effectively. These include age, gender, level of education and previous occupation or the entrepreneur's organizational background. The next section discusses the entrepreneur's expertise in relation to his or her education and previous background.

- **Expertise of entrepreneur and enterprise growth**

  Bull et al. (1995) said a new combination that causes discontinuity does not occur by chance but is the result of deliberate action, plan or vision implementation. This means that a new combination requires expertise. They proposed that an entrepreneur's expertise can be due to the educational or work background.

- **Educational level and expertise and enterprise growth**

Knowledge development through education creates an environment in which entrepreneurship can take place. According to Holcombe (2003), the entrepreneur needs the knowledge to recognize an entrepreneurial opportunity. He also stated that there is a direct link between entrepreneurship and knowledge, as knowledge is an important ingredient in the production of entrepreneurial insights. A strong educational basis is required for innovative entrepreneurship (Acs & Audretsch, 2010). Education is an important element of entrepreneurship. However, studies that focus on entrepreneurs ' background in education have different findings. Although some studies have found a positive correlation between education and self-employment (Blanchflower, 2004; Byabashaija & Katono, 2011; Walter, Parboteeah, & Walter, 2013; Zhang, Duysters, & Cloodt, 2014), some studies have found a negative correlation. Uhlaner et al. (2004) showed that a lower rate of self- employment accompanies a higher level of education in a country. Ransom et al. (2005) on the other hand identified that the majority of those involved in early entrepreneurial activities in the Netherlands are highly educated people. SME owners and employees in developing countries are relatively less educated than the majority of the population and tend to have less educated owners and employees than large companies (World Bank 2001). According to the Global Business School Network (GBSN) (2013), poor education can reduce people’s employability, weaken their entrepreneurial skills and influence enterprise performance.

- **Previous work experience and expertise and enterprise growth**

Entrepreneurs can acquire both the expertise and the necessary relationships from previous work experience. In accordance with Lu and Tao (2010), most would-be entrepreneurs have worked in companies of varying degrees of state ownership or in public organizations or

government agencies. Ardichvili, Page, and Wentling (2003) identified that three main dimensions of prior knowledge are important for the process of entrepreneurial discovery, i.e. prior market knowledge, prior market servicing knowledge and prior customer problem knowledge. An empirically rigorous Inter-American Development Bank (IDB) study of high-growth entrepreneurs give insights into the importance of skills gained during past employment (Davidsson, 2010). Exploring the dynamism of small firms in four East Asian countries showed that successful entrepreneurs particularly benefited from marketing, management and negotiation skills developed in previous jobs.

Based on Marvel, Davis, and Sproul (2016), comprehensive human capital is accumulated by knowledge acquired through work experience or the conduct of a different business. This refers to the cognitive processes involved and the entrepreneur is an active and learning part of the process. Acs and Audretsch (2010) identified that people are driven by human cognitive processes to see things related to their existing knowledge. As a result, “creativity" is more about putting together previous knowledge in new ways than dreaming up something completely new. Therefore, prior paradigms and problem-solving approaches limit the most innovative thinking and limit potential variations in ideas. They also argued that with all the complexity, risks and uncertainty associated with the establishment of a company, the safest choice is to imitate practices, products, and processes that have already proved successful. This type of entrepreneur was identified by Hernández-Maestro, Muñoz-Gallego, and Santos-Requejo, (2009). They also observed that the knowledge of the entrepreneur is a source of competitive advantage for the enterprise.

2.6. Factors affecting established enterprises (post-establishment factors)

These are factors that affect different aspects of the enterprise after operations have commenced (Adeola, 2016; Anggadwita, Luturlean, Ramadani, & Ratten, 2017; Baum, 2018; Debroux, 2018; Saleem, 2017). These are some of the factors from literature business environment, socio-cultural environment, human resource management, and business survival objectives. These factors are discussed below.

2.6.1. Business environment and enterprise growth

The business environment is the space and geographic area within which the business is located; a village, city, country, or a continent. It deals with government policies and programmes (Adeola, 2016). Business environment also involves accessibility to services like the Agricultural Extension Veterinary Services to help them thrive and grow their businesses. A company's marketing scheme must work within the facilities that make up the system's atmosphere, which is the primary environmental forces that are not readily regulated or manipulated by a company's executives (Babatunde & Adebisi, 2012). Studies have shown that business development is linked to country-level economic growth indices, the quality of the legal and regulatory setting, easy access to finance and the incidence of informality (Klapper & Love, 2016; Lerner, Schoar, Klapper, Amit, & Guillén, 2013). Costly regulations can also hinder the establishment of companies and economic growth (Djankov, La Porta, Lopez-de-Silanes, & Shleifer, 2002). A holistic strategy is needed to tackle the problems of a viable future such that reactions to environmental modifications need to be parallel with financial and social change.

2.6.2. Socio-cultural environment and enterprise growth

The socio-cultural environment includes health awareness, population growth, age distribution, career attitudes and lays emphasis on safety. Social trends affect the demand for a company's products and how it operates (Thornton, Ribeiro-Soriano, & Urbano, 2011; Garcia, Mircea, & Duque, 2010). For instance, an ageing population usually involves a smaller and less willing workforce increasing labour costs. Companies can adopt different management strategies to tackle these social trends such as the recruitment of older workers (Babatunde & Adebisi, 2012).

2.6.3. Human resource development and enterprise growth

Human resource development (HRD or HR) is the term commonly used to describe all those organizational activities concerned with recruitment and selection, designing work for, training and developing, appraising and rewarding, directing, motivating and controlling workers (Stredwick, 2014). It refers to the framework of philosophies, policies, procedures and practices for the management of the relationship that exists between an employer and an employee. Human resource development also includes continuous training and degree courses that employees may have taken. When it comes to factors that affect an enterprise, the human resource factor is considered most significant since it is the people who use all other resources (Gifford & Nilsson, 2014). Developing the human resource of an enterprise ensures that employees are skilful and up to date with new trends and technologies that are useful for the effective operation and eventually growth of the enterprise.

In this regard, staffing and management of the human resource in an organization is a prime objective. According to Chandan (2010), management and non-management staffing of an organization occurs in four consecutive steps: recruitment, selection, training and growth, and performance assessment.

2.6.4. Business survival objectives and enterprise growth

Fifty per cent of well-structured enterprises could only survive after five years (De Kok, 2011) and this is attributed to some factors such as Inadequate business information, poor management skills, poor marketing skills and poor corporate governance (Fjos et al., 2010; Mbugua et al., 2013; Wong & Merrilees, 2005). Researchers from different business backgrounds have convincingly concluded that environmentally sound policies can lead to competitive advantages and better financial performance (Sharma, Iyer, Mehrotra, & Krishnan, 2010). To tackle the problems of a sustainable future a holistic approach is needed: the solutions to environmental changes should inevitably be linked to economic and social change. Strategies should be designed to improve performance regarding the identified problems, although in many cases there is no practical link between establishment and survival strategies (Baumgartner & Ebner, 2010).

2.7. Indicators of enterprise growth

Enterprise growth is the process of developing a company from small to large and from a weak to a strong base (Mao, 2009). According to Sun (2004), the meaning of entrepreneurial growth is the development process in which the company maintains the tendencies of balanced and stable growth of the overall performance level including output, sales volume, profit and gross asset or continues to realize significant improvements in the overall performance and stage of development quality and level. Mao (2009) explained that the significance of business growth contains the following three connotations;

i. **The time property of the enterprise growth:** The basis for the evaluation of the company's growth is a long period during which long-term patterns and business development cycles can be identified and not the company's position at a given stage.

ii. **The dynamic property of the enterprise growth:** The company's growth is not a stable process without difficulties. In the growth process, companies always move from balance to imbalance, resulting in a transition from imbalance to balance and from lower balance to higher balance by imbalance.

iii. **The enterprise growth is the unification of quantity and quality:** The quantity rise is mirrored in the company's growth such as sales growth, market share, product price, productivity and staff. Quality growth embraces improving business quality, including the ability to innovate from unrelated to mature manufacturing technology, best investment and efficiency in output, organizational innovation, and reform. Mao (2009) indicated that five types of indicators are used to measure the growth of enterprises. These are turnover or sales, jobs, market share, performance and assets of multiple indicators. Kruger (2004) classified these indicators as quantitative and qualitative growth indicators.

Quantitative growth can be characterized by the profitability of the company and the value of the company. Qualitative growth targets are linked to quantitative growth targets not as an end in themselves but as a strategic means for achieving the enterprise's growth. These include competitive position, customer service, and quality.

While there are many ways to measure growth, Mason and Brown (2013) indicated that employment growth, sales growth, and profitability are the three most important indicators for policymakers. In addition, the measurement of employment growth in businesses is directly linked to rural development objectives and relevant to policy decisions (Backman & Palmberg, 2015). A growing company will almost always have to hire new staff to meet new production requirements, new marketing campaigns, new record keeping, and administrative requirements. For the purposes of the study, enterprise growth would be regarded as a unification of quantity and quality.

Three growth indicators would, therefore, be measured for growth in employment, growth in sales and technological growth. The growth in employment would be measured by the average increase in the number of employees over the last three years and the growth in sales would be measured by asking the respondent to assess the average sales volume increase over the past three years. Technological growth would be measured by the assessment of the mechanisms used to meet the basic customer needs, whether manual or mechanical. It is therefore important to establish a relationship between the factors of establishment and the different indicators of company growth. The next section examined relevant literature on this topic.

2.8. Enterprise establishment factors and enterprise growth

This section discusses the relevant literature on the contribution of enterprise factors to business growth.

2.8.1. Type of enterprise and enterprise growth

Literature has identified that enterprise (pre-establishment) factors pose a greater threat than those encountered after the establishment (post-establishment factors) of the business (Chimucheka & Mandipaka, 2015; Visser, Phillips, Amadi-Echendu, & Chodokufa, 2016). Therefore, business people who effectively negotiate the initial start-up obstacles are more likely to succeed in their business in the future. Visser et al. (2016) said that the growth of the company will be affected positively if entrepreneurs can identify the type of products or services that a society needs. The identification of basic needs is a key obstacle that entrepreneurs must overcome in order to stay in business. The products or services must be relevant to the customer (members of the company) and have the ability to solve a specific problem that the customer exchanges with value.

According to Strotmann (2007), an investigation into the entrepreneurial survival of German manufacturing companies showed that in addition to the start-up size, the type of establishment could also influence its probability of survival. Cader and Leatherman (2011) provide empirical results on the factors affecting the business success of SMEs in Bangladesh and observes that the characteristics of SMEs do not have a significant impact on business success. Employment is created when new products and services for customers are identified. The various activities in the value chain provide an opportunity for the establishment of different companies in the agricultural sector. Schaffnit-Chatterjee (2014) analysed the agricultural value chain in Sub-Sahara Africa and noted that increased activity in the value chain, particularly in the processing of raw products, would lead to increased employment.

Due to differences in the products produced and their means of production, the technological needs of enterprises vary. Technology improves production and leads to the efficient utilization of agricultural resources. However, Dennis, Aguilera, and Satin (2010) identified that technology is not used in isolation, but requires private sector commitment and investment in a political environment in which public policies stimulate entrepreneurial activity. This includes the availability of an adequately trained and educated workforce, fiscal incentives for Research and Development (R&D) and innovation and international regulations that are not unnecessary trade barriers.

2.8.2. Customer needs and enterprise growth

Hawkins and Vel (2013) indicates that you need customers who engage in three different types of loyalty behaviours in order to have a growing business such as improving profit and maximizing customer lifetime value. Investigating the top drivers of customer loyalty of typical business to business technology companies, he discovers that new customers, the expansion of existing

relationships and the long- term preservation of customers require a variety of efforts. He explained that the enterprise must produce a solid product and create an enabling environment for customers to easily transact business in order to gain new customers. In order to improve sales and cross-sales capabilities, the enterprise must have a clear and distinct direction and communicate that path effectively to its customers.

2.8.3. Financial environment and enterprise growth

Nichter and Goldmark (2009) found that the business environment has different relationships between micro and small business growth and business as a whole. They found that regulatory barriers are an unreasonable burden for smaller companies. Studies in Iran show that government financial support can only be helpful in the growth of small and medium-sized enterprises if programming exists in specific economic frameworks (Afshari, Sattari Ardabili, & Ali, 2012). They found that growth incentives and discounts are the main drivers of SME growth and have a strong relationship with all SME growth includes sales, personnel growth, product variety, and business background. In measuring business environment variables on the company size of African companies, Iacovone, Ramachandran, and Schmidt (2014) identified that access to finance and access to land is significant and positively correlated to the size of the company. They point out that the business environment, as well as the company and market characteristics, impose constraints that limit the growth of African companies.

Nganda, Wanyonyi, and Kitili, (2014), investigating the determinants of SME growth in Kakamega, Kenya's central sub-county, found that factors such as financial base, borrowing from financial institutions, business investment, owner and employee financial knowledge and access to microcredit facilities are marginally weakly linked to SME growth. Anthony and Thomas (2012) studied the production of small and medium-sized enterprises in the Ho Municipality of Ghana

and demonstrated that access to credit has a significant positive impact on the growth of SMEs in manufacturing.

The literature examined the influence of access and the availability of funds for companies on the growth of companies and reveals that there is a strong link between them. However, the links are affected by policies and programmes of a company and the market characteristics of a particular country.

2.8.4. Business information and enterprise growth

Bunyasi, Bwisa, and Namusonge (2014) identified the significant impact of access to business information on the growth of SMEs. Muriithi, Huka, Njati (2014) investigated the factors that influence the growth of the dairy business and showed that the interaction of business information and Extension Service providers had a positive impact on the earnings of the dairy entrepreneurs. The literature examined above shows that business information is closely related to the growth of enterprises.

2.8.5. Expertise from an educational background and enterprise growth

The relationship between the level of education and the growth of the company is not well established. While some researchers report the positive impact of education on company growth, others found that education had a negative or no significant impact on company growth. A study by the Inter-American Development Bank (IDB) found, for example, that secondary school achievement had no discernible impact on Latin America's firm growth (Kantis, Angelelli, & Koenig, 2004). On the other hand, GEMINI studies in Sub-Sahara Africa showed that secondary school entrepreneurs are more likely to grow in Kenya and Zimbabwe, but that primary education

has no significant effect on SME expansion (Javid & Iqbal, 2008; Mead & Liedholm, 1998; Paul, 2016).

Some studies found no positive link between education growth and performance growth per worker (Wittenberg & Leibbrandt, 2017). Backman and Palmberg (2015) identified that the processes of accumulation of human capital related to education, training or work and management experience continue to play a key role in predicting successful business. They added that education and training are important business variables related to knowledge, skills, motivation, self-confidence and the ability to solve short and long-term business planning problems.

Nitcher and Goldmark (2005) found that more education corresponds to the growth of MSE above the country-specific threshold. They explained that higher education can increase the opportunities offered by an entrepreneur, but ironically it could also hinder the growth of the SME.

2.8.6. Expertise from previous work experience and enterprise growth

Experience gained at work or through previous work is a key growth factor that influences enterprise growth (Nitcher & Goldmark, 2005). Work experience is very important for the development of skills in SMEs because entrepreneurs with more years of work experience usually have a faster work rate in SMEs. One the study, for example, found that Kenyan entrepreneurs with at least seven years of experience expanded their companies faster than those without such experience (Mead & Liedholm, 1998; Paul, 2016; Wittenberg & Leibbrandt, 2017).

Exploring the dynamics of small firms in four East Asian countries, Nitcher and Goldmark (2005) revealed that successful entrepreneurs particularly benefited from marketing, administration and negotiation skills developed in previous jobs. The review has shown that the knowledge, skills and

experience entrepreneurs acquire from their former jobs or organizations affect the growth of their enterprises.

2.8.7. Business survival objectives and enterprise growth

Fifty per cent of well-structured enterprises could only survive after five years (De Kok, 2011) and this is attributed to some factors such as Inadequate business information, poor management skills, poor marketing skills and poor corporate governance (Fjos et al., 2010; Mbugua et al., 2013; Wong & Merrilees, 2005). Researchers in several disciplines of industry have argued strongly that sustainable strategies can help to achieve competitive advantage and better financial performance (Sharma, Iyer, Mehrotra & Krishnan, 2010). To meet the challenges of a sustainable future, a systemic approach is necessary: approaches to environmental changes should inevitably be linked to economic and social change. Strategies to improve performance in response to established challenges should be built but in many situations there is a lack of connections between the topics of development and survival strategies (Baumgartner & Ebner, 2010).

2.8.8. Business environment and enterprise growth

The business environment is the space and geographic area within which the business is located; a village, city, country, or a continent. It deals with government policies and programmes. Business environment also involves accessibility to services like the agricultural and veterinary extension services. to help them thrive and grow their businesses. A company's marketing scheme must work within the facilities that make up the system's atmosphere, which is the primary environmental forces that are not readily regulated or manipulated by a company's executives (Babatunde & Adebisi, 2012). Studies have shown that business development is linked to country-level economic growth indices, the quality of the legal and regulatory setting, easy access to finance and the incidence of informality (Klapper & Love, 2016; Lerner et al., 2013). Costly regulations can also

hinder the establishment of companies and economic growth (Djankov, La Porta, Lopez-de-Silanes, & Shleifer, 2002). A holistic strategy is needed to tackle the problems of a viable future such that reactions to environmental modifications need to be parallel with financial and social change.

2.8.9. Socio-cultural environment and enterprise growth

The socio-cultural environment includes health awareness, population growth, age distribution, career attitudes and lays emphasis on safety. Social trends affect the demand for a company's products and how it operates (Thornton, Ribeiro-Soriano, & Urbano, 2011; Garcia, Mircea, & Duque, 2010). For instance, García et al. (2010) identified that an aging population usually involves a smaller and less willing workforce (increasing labour costs). Companies can adopt different management strategies to tackle these social trends such as the recruitment of older workers (Babatunde & Adebisi, 2012).

2.9. Definition of concepts

This section defines the various concepts used in the study. These include enterprise factors (both pre and post establishment factors), enterprise growth, and livelihood outcomes.

2.9.1. Pre and post-establishment factors

These are elements in the social and business environment that contribute to or influence the creation of a company. The factors considered in this study are derived from the theory of discontinuity of the establishment of enterprises and the theory of the origin of the previous organization. They include the characteristics of the enterprise, the availability of funds, business information and the expertise of the entrepreneur.

- **Enterprise characteristics**: This is the entrepreneurs' prior knowledge of the nature of the enterprises before commencement. It includes the type of enterprise (production/processing agribusiness) and the needs of the customers that products meet. The customer requirements that the products identified by the contractor meet are classified as consumption requirements and raw material requirements. The nature of the company is also referred to as the fundamental tasks that the entrepreneur identifies.
- **Funds availability for enterprise establishment**: This refers to the knowledge of the funding available to entrepreneurs from government institutions and other organizations to establish enterprises.
- **Business information:** This refers to the information the entrepreneur receives regarding his/her business activities.
- **Entrepreneur's expertise:** The expertise of the entrepreneur refers to the skills and capabilities that entrepreneurs acquire before the company is established due to their educational and work backgrounds.
- **Business survival objectives.** These refer to systems, policies and strategies that are put in place to ensure the business thrives and flourishes. Researchers from different disciplines of industry have concluded convincingly that green approaches could help bring competitive advantage and better financial results. When proper fundamentals are put in place to safeguard the enterprise, there is sustained growth.
- **Business environment.** These are government policies that affect enterprises in a given locality. Policies on how to establish an enterprise, tax regulations, regulations on import and export duties etc. that affect the survival and growth of enterprises.

- **Socio-cultural environment.** Social trends affect the demand for a company's products and how it operates. It is the way people think and what they believe in. Every community has its own way of life and the products and services they need. Socially there may be a stigma on certain kinds of jobs and this may affect the type of people that may accept to work in the organization.
- **Human resource development.** These are the human beings that operate the affairs of the organization. It also includes continuous training and degree courses. The proper structuring and arrangement of resources to achieve the goals of the enterprise depend mostly on human resource management.

Enterprise growth is defined as an increase in the number of employees, the sales volume and technological improvement.

- **Employment growth:** Employment growth is termed as a change in the number of employees over a time period.
- **Sales growth:** Sales growth is defined as a change in product sales volume over a period of time.
- **Technological growth:** Technological growth is outlined as advancing or improving the use of technology from “manual” to “mechanical” technology over a period of time.

2.9.2. Improved livelihood outcomes

Livelihood outcomes are the product of integrating behaviors and resources and these effects are usually expected to be favourable. Outcomes help us to understand what motivates people to behave the way they do, what their priorities are and how they are likely to respond to new opportunities (Morton & Meadows, 2000). In the livelihood framework, outcomes have been known to include more sustainable use of natural resources, increased income (afford Agricultural

extension services), reduced vulnerability (improved social capital), improved food security, and increased well-being (improved health). For this study, the outcomes that will be considered are improved health, ability to afford Agricultural Extension Services, and improved social capital. Morton and Meadows (2000) indicated that it should not be assumed that people are entirely dedicated to maximizing their income. Rather, we should recognize and seek to understand the richness of potential livelihood goals. While some people may be aiming at food security and higher income, others may also be thinking of good health, education for their children and themselves. Even though the right to a standard of living adequate for health and well-being is supreme, it is not, however, achieved by many of the poor whose prime day to day objective is to continue to secure sufficient food to eat (Morton & Meadows, 2000).

- **Ability to afford Agricultural Extension Services:** Research shows that access to credit facilities by entrepreneurs may enable them to increase productivity and thereby enhance their ability to afford Agricultural Extension Services (Gyenfie, 2014). Most entrepreneurs are unable to afford Agricultural Extension Services due to financial constraints (Mulhall & Garforth, 2000; Nambiro, Omiti, & Mugunieri, 2006). Attaining growth will improve on their ability to afford Agricultural Extension Services.
- **Improved health:** Chambers (1997) described improved health as a good quality of life which is exposed to the whole range of human experiences, social, mental and spiritual as well as material. He added that entrepreneurs with little resources have little chance to achieve improved health which means those who are able to grow their enterprises are likely to achieve improved health.
- **Improved social capital:** Most growth attained by entrepreneurs result in improved social capital such as having a voice when it comes to social issues (Davidsson & Honig, 2003).

Different people are affected in different ways by the vulnerability factors. One important aspect of reducing vulnerability or improving social capital is to help entrepreneurs attain growth in their businesses which are of particular importance to their livelihoods (Morton & Meadows, 2000). Efforts can then be concentrated on understanding the impact of these factors and how positive aspects can be maximized.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This section entails the research design adopted for the study, the sampling size and techniques used, design of data collection tools, questionnaire pre-testing and administration, and the collection of data from the field. The measurement of some of the key variables such as enterprise factors; and enterprise growth (employment growth, sales growth, and technological growth); are discussed in this chapter in addition to the research area.

3.1. Demography of Akuapem-North Municipality

The study area is the Akuapem-North Municipality, one of the 260 Metropolitan Municipal and District Assemblies in Ghana (Figure 1). It also forms part of the 33 Municipalities and Districts in the Eastern Region. The Municipality lies between longitude 0° 00°E and 0° 20°E of Greenwich Meridian and latitude 5° 51° and 6° 10° north of the equator (Council, 2016). The Municipality shares boundaries with other four districts which are situated in the Eastern Region and one in the Greater Accra Region. The four districts in the Eastern Region are Suhum Kraboa Coaltar which is located in the West, New Juaben in the North West, Yilo Krobo in the North East and Akuapem South in the South. Also, the only district in Greater Accra Akuapem North Municipal which shares a boundary with Akuapem North Municipal is Dangbe West which is located in the Southwest. The Municipal Assembly covers an area of about 450sq kilometers which is about 2.3% of the total area of the Eastern Region (MoFA, 2012). The Municipality is recognized to have a total of 280 settlements and 15 Town and Area Councils evenly distributed. According to the Ghana Statistical Service (GSS), (2013), the Municipality has a population of 104,753. Within this population, males and females are considered to be 46.7% and 53.3% respectively. Most of

the inhabitants in the rural areas engage in agriculture, quarrying and sand winning activities as their source of income to households. Majority of the populace are farmers; hence, the total number of male and female farmers are 31,589 and 38,602 respectively. This denotes that the total number of farmers in the Municipality is 70,185 which constitute 67% of the population. In terms of crop production, major crops grown in the Municipality are cassava, maize, yam, rice, cocoyam and plantain. Out of these major crops, cassava is known to be the leading crop produced in the Municipality. Thus, the Ministry of Food and Agriculture (MoFA, 2012) postulates that as of 2011, cassava production was about 673,056 metric ton per hectare.

Figure 2 Map of study area

3.2. Research Design

Research design relates to the action plan which connects philosophical inferences to particular techniques (Wenden, 1981). It includes study design, cross-sectional design, longitudinal design, case study design, correlational design, and comparative design (Bryman & Becker, 2012). For this study, the correlational research design was used.

There are three research methods to explore study issues, according to Cresswell, (2014). These are quantitative research, qualitative research and mixed method research. Quantitative research is based on the quantitative information collection comprising of numerical data and qualitative study is based on qualitative information collection consisting of non-numerical data such as words and images. Mixed method study includes a mixture of techniques, approaches or other paradigm features of quantitative and qualitative studies.

In this study, a mixed method was used to collect both quantitative and qualitative data. A survey was conducted using questionnaires with multiple closed or quantitative items and several open-ended or qualitative items (Appendix). The central premise of the design used is that the combined approach provides a better understanding of research issues than either approach alone (Wenden, 1981). In addition, both qualitative and quantitative information were gathered to complement each other in order to minimize subjectivity and increase objectivity.

3.3. Target Population

The target population consisted of all entrepreneurs of the cassava industry in the Akuapem-North Municipality of the Eastern Region of Ghana. This includes those who are into cassava production and those who are into the processing of cassava into Gari and or Cassava dough. The study area was selected because reasonable conclusions could be drawn in the area which is highly populated with cassava entrepreneurs.

3.4. Sampling Method and Sample Size

Sampling enables the researcher to study a comparatively small number of population units and acquire information that is representative of the entire target population. Therefore, sampling is the method of selecting the target population research units to be included in the study (Gregson, 2015). Purposive sampling technique was employed to select agro-enterprises in cassava production and processing in the Akuapem-North Municipality in the Eastern region of Ghana. The study area was selected because, considering the sample size used, it would be easy to come across, it has the largest producers and processors of cassava in the country.

Snowball sampling technique was used to select the cassava producers and processors most of whom are in the rural communities. This technique was used to attain a representative sample for the study. Only Ghanaian owned agro-enterprises were sampled. A sample size of 200 entrepreneurs in the cassava production and processing industry was selected for interview in the Akuapem-North Municipality in the Eastern Region of Ghana. A higher sample size could have been used but this sample size was selected because it was representative enough of the population of entrepreneurs in cassava production and processing in the study area.

3.5. Questionnaire Design

A questionnaire was designed for data collection. Data were collected on the characteristics of the agro-enterprise for basic tasks identified by the entrepreneur (Boateng & Agbe, 2018), funds availability for enterprise establishment (Chimucheka & Mandipaka, 2015; Nichter & Goldmark, 2009; Visser et al., 2016), business information, entrepreneur's expertise (Bunyasi et al., 2014), human resource development (both training and continuous education) (Gifford & Nilsson, 2014; Stredwick, 2014; von Hippel, 1994), business survival objectives including motivation and advertisement (Sharma et al., 2010), business environment (Babatunde & Adebisi, 2012; Klapper

& Love, 2016; Lerner et al., 2013), and sociocultural environment (García et al., 2010; Thornton et al., 2011). Data were also collected on indicators of enterprise growth; employment growth, sales growth and technological growth (Boateng & Agbe, 2018; Moreno & Casillas, 2007).

3.6. Questionnaire Pre-testing and Administration

Pre-testing of the questionnaire was conducted at Adukrom in the Okere District of the Eastern Region to establish the relevance of the questions to the respondents and to ascertain whether the key variables from the objectives were arrived at for analysis. After the pre-testing, the questionnaire was reorganized to complement the time for the interview. The questionnaires were altered accordingly to enhance easy understanding in the local language and the analysis of the data.

3.7. Field Data Collection

Data were collected between November 2018 and February 2019. Field data were collected by conducting a face to face interview for the respondents. This method of data collection has the benefit of providing in-depth data that is both qualitative and quantitative. Responses from the interview were critically recorded in other to provide clarification to answers specified by the respondents.

3.8. Methods and Instrumentation

This section reckons how the data were collected, the type of data collected and how the data collected was analyzed. It is subdivided into the three objectives of the study.

3.8.1. Objective one

To determine the contribution of enterprise factors to employment growth of cassava enterprises in the study area.

Methods and instruments

Structured questionnaires, thus closed and open (Appendix I) were administered to cassava producers and processors to obtain specific information.

Data collection and analysis

Data were collected on the enterprise factors for agro-businesses. The factors are (1) enterprise characteristics, (2) funds availability, (3) business information, (4) entrepreneur's expertise, (5) business survival objectives, (6) business environment, (7) socio-cultural environment, and (8) human resource development (Appendix I). Data were also collected on the indicators of employment growth for the past five years (2014 – 2018) to determine the current employment growth rate of the enterprises. The data collected were analyzed using chi-square test of independence to determine the significance of the relationship between each enterprise factor and the employment growth indicators using the computer package Statistical Package for the Social Sciences (SPSS) for Windows, version 23.0. Findings which were observed to be significant after Chi-square test was performed were then analyzed using logistic regression to determine the contribution of variables which explained enterprise growth.

3.8.2. Objective two

To determine the contribution of enterprise factors to sales growth of cassava enterprises of Akuapem-North Municipal Assembly.

Methods and instruments

Structured questionnaires, thus closed and open (Appendix I) were administered to cassava producers and processors to obtain specific information.

Data collection and analysis

Data were collected on the enterprise factors for agro-businesses. The factors are enterprise characteristics, funds availability, business information, entrepreneur's expertise, business survival objectives, business environment, sociocultural environment, and human resource development (Appendix I). Data were also collected on the indicators of sale growth for the past five years (2014 – 2018). The data that was collected was analyzed using Chi-square test of independence to determine the significance of the relationship between each enterprise factor and the sales growth indicators using the computer package SPSS for Windows, version 23.0. Findings which were observed to be significant after Chi-square test was performed were then analyzed using logistic regression to determine the contribution of variables which explained enterprise growth.

3.8.3. Objective three

To determine the contribution of enterprise factors to technology growth of cassava enterprises in the Akuapem-North Municipal Assembly.

Methods and instruments

Structured questionnaires, thus closed and open (Appendix I) were administered to cassava producers and processors to obtain specific information.

Data collection and analysis

Data were collected on the enterprise factors for agro-businesses. The factors are enterprise characteristics, funds availability, business information, entrepreneur's expertise, business survival objectives, business environment, sociocultural environment, and human resource development (Appendix I). Data were also collected on the indicators of technology growth for the past five years (2014 – 2018). The data that was collected was analyzed using Chi-square test of independence to determine the significance of the relationship between each enterprise factor and technology growth indicators using the computer package SPSS for Windows, version 23.0. Findings which were observed to be significant after Chi-square test was performed were then analyzed using logistic regression to determine the contribution of variables which explained enterprise growth.

3.8.4. Objective four

To determine how growth affects the livelihood outcomes of cassava entrepreneurs in the study area.

Methods and instruments

Structured questionnaires, thus closed and open (Appendix I) were administered to cassava producers and processors to obtain specific information.

Data collection and analysis

Data were collected on the three enterprise growth variables (employment; sales; and technology) (Appendix I). Data were also collected on the indicators of certain livelihood assets. Entrepreneurs were asked if they had acquired the various livelihood assets through proceeds from their enterprises or through other means. The data collected were analyzed using Chi-square test of

independence to determine the significance of the relationship between each enterprise growth variable and livelihood asset indicators using the computer package SPSS for Windows, version 23.0. Findings which were observed to be significant after Chi-square test was performed were then analyzed using logistic regression to determine the contribution of variables which explained enterprise growth.

3.8.5. Measurement of enterprise growth

Enterprise growth for the purpose of this study is defined as the percentage change in the employee number, the sales volume, and the technology within a five-year period thus from 2014 to 2018. The growth of the enterprise is a scale extension and it is both qualitative and quantitative. The qualitative growth includes the change in technology from “manual” to “mechanical”. The quantitative growth comprises the relative change in the number of employees and sales volume expressed as a percentage.

Employment growth was measured by inquiring the respondents (the entrepreneurs) to specify the number of employees of the agro-enterprise within the past five years that is 2014, 2015, 2016, 2017 and 2018. It was calculated by deducting the number of employees in the year 2014 from the number of employees in the year 2018. An increasing number of employees is considered a positive change or positive growth, whilst the decreasing number of employees and no change in the employee number was considered as no growth or no change.

Sales growth was measured by collecting data on the sales volume of the respondents within the past five years that is 2014, 2015, 2016, 2017, and 2018. Since the cost of production and processing was different in the various communities, questions were asked on how much they spent in production for each of the past five years. A focus group discussion was done to determine

how much entrepreneurs in that community spend averagely in production or processing and that figure and their annual sales were used to calculate the income. Each entrepreneur's sales volume was calculated by deducting the sales volume in the year 2014 from the sales volume in the year 2018. Increasing inclination in sales volume is termed a positive growth; the decreasing trend in sales volume and zero sales volume were categorized as no change or no growth.

Technological growth was defined as the advancement in technology in the use of manual or mechanical means of production for the past five years which is 2014, 2015, 2016, 2017, and 2018. Technological growth is classified as a positive growth when technology usage changed from "manual to mechanical"; it is considered as no growth or no change when technology usage changed from "mechanical to manual" or remained the same that is either "manual or mechanical" throughout the five years. Example of such growth are transition from using simple tools like hoes, cutlasses and water troughs to using tractors, mechanized planters and harvesters.

3.9. Summary

The chapter dealt with the research methodology of the study; the research design, the study area, the population, sample size and sampling methods, data collection tools and the measurement of some of the key variables of the study. Mixed method research was used in this study with the collection of both qualitative and quantitative data. Purposive sampling method was employed to select the study area and snowballing sampling method was employed to select respondents from different farmer-based organizations in the Akuapem-North Municipality in the Eastern region of Ghana. A total of 200 entrepreneurs made up of both processors and producers of cassava were nominated.

A structured opened and closed-ended questionnaire was framed for data collection. The data were analyzed using both descriptive and statistical tools to determine the contribution of enterprise factors to the growth of agro-enterprises; enterprise factors to the acquisition of livelihood assert; and how growth affects the acquisition of these livelihood asserts using the computer package SPSS for Windows, version 23.0. The chapter ends with an insight into how some of the key variables such as enterprise growth and improved livelihood outcomes were measured to enable the analysis of the data.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

This chapter presents the results and discussion of data obtained from the field. The section starts by presenting results on the description of the socio-demographic characteristics of respondents and the description of respondents' enterprise factors, enterprise growth, and acquisition of livelihood assets. The remaining part of the chapter presents a discussion on data in accordance with the study's objectives. The first objective was: to determine the contributing effect of enterprise factors on employment growth. The second objective was: to determine the contributing effect of enterprise factors on sales growth. Objective 3 was to determine the contributing effect of enterprise factors on technology growth and the last objective was: to determine how growth affects livelihood outcomes of cassava entrepreneurs in the study area. The analysis for all four objectives were achieved using Chi-square test of independence and the significant variables were further analysed using logistic regression.

4.1. Description of socio-demographic characteristics of respondents

Table 1: Statistics of Socio-Demographic Characteristics of Respondents

Variables	N (%)	*M* (SD)
Sex		
Male	103 (51.5)	
Female	97 (48.5)	
Total	200 (100)	
Education		
No formal education	53 (26.5)	
Primary school	57 (28.5)	
Middle school/JHS	62 (31.0)	
Senior High School	28 (14.0)	
Total	200 (100)	
Age		42.96 (11.31)
Total	200 (100)	

Field Survey, 2019

Table 1 above revealed that the male respondents of this study were a little more than the females. It is clear that majority of the respondents 62 (31 per cent) have attained a middle/JHS level education, followed by 57 (28.5 per cent) who also have had primary education. Only a few numbers of the respondents 28 (14 per cent) have completed senior high school with 53 (26.5per cent) revealing that they have not had any formal education. The average age of the respondents was 43 years.

4.2. The Contribution of Pre and Post Establishment Factors to the Growth of the Cassava Industry

The contribution of pre and post-establishment factors to the growth of the cassava industry was discussed under three subheadings namely employment growth, growth in sales volume, and technological growth. These were the variables used in measuring the growth of the cassava industry. The enterprise factors (Pre- and Post-establishment factors) were independently cross tabulated with each of the three enterprise growth variables using Chi-square to help determine whether there was a positive change or a no change over the five-year period. Pre and post-establishment factors which had a significant relationship with growth were analyzed using logistic regression to determine the extent of their contribution.

4.3 The Contribution of Enterprise Factors to Employment Growth of the Cassava Industry

This section discusses how enterprise factors; enterprise characteristics, funds availability, business information, entrepreneur's expertise, human resource development, survival objectives, business environment, and sociocultural perception affects employment growth. The enterprise factors were independently cross tabulated with employment growth. Each enterprise growth variable was analyzed by the use of chi-square to determine its influence on employment growth, be it a positive change or a no change.

Table 2: Chi-square Results of Pre-Establishment Factors and Employment Growth

Variables	Employment growth		Chi-square results
	No change	**Change**	
Type of Agro Enterprise			$\chi^2 = 0.95$;
Agro producing enterprise	31(31%)	69(69%)	ρ value = 0.76;
Agro processing enterprise	29(29%)	71(71%)	df = 1. NS
Customer Needs			$\chi^2 = 5.85$;
Consumption need	32(24.1%)	101(75.9%)	ρ value = 0.01;
Raw material need	28(41.8%)	39(58.2%)	df = 1. Sig
Funds Availability			$\chi^2 = 9.57$;
Available	27(46.6%)	31(53.4%)	ρ value = 0.01;
Not available	33(23.2%)	109(76.8%)	df = 1. Sig
Access to Business Information			$\chi^2 = 11.81$;
Access	44(40.7%)	64(59.3%)	ρ value = 0.01;
No access	16(17.4%)	76(82.6%)	df = 1. Sig
Business Information Sources			$\chi^2 = 4.51$;
Business advisory centres	5(33.3%)	10(66.7%)	ρ value = 0.01;
Family/Friends	2(5.4%)	35(94.6%)	df = 3. Sig
AEA/NGOs	29(40.8%)	42(59.2%)	
Other source	24(31.2%)	53(68.8%)	
Entrepreneur's Expertise from			$\chi^2 = 3.71$;
Educational Background			ρ value = 0.03;
Expertise	6(15.8%)	32(84.2%)	df = 1. Sig
No Expertise	54(33.3%)	108(66.7%)	
Entrepreneur's Expertise from			$\chi^2 = 2.19$;
Previous Work Background			ρ value = 0.09;
Expertise	16(41%)	23(59%)	df = 1. NS
No Expertise	44(27.3)	117(72.7%)	

Field Survey, 2019

Table 3: Logistic Regression Results of Pre-Established Enterprise Factors and Employment Growth

Variables	Coefficients (β)	*Standard error(B)*	*Significance (p)*
Customer Needs	-.56	.115	.57
Business information Source		.045	
AEAs	.16	.685	1.17
Media	2.20	.006	8.98
Family/Friends/Others	-.25	.712	.78
Educational Background Expertise	-1.59	.003	.20
Work Experience Expertise	.35	.419	1.41
Funds Available	.58	.120	1.78
Access to Information	1	.007	2.73

4.3.1 The Contribution of the Type of Agro Enterprise to Employment Growth

A chi-square test of independence was used to determine the relationship between the type of agro enterprise and employment growth. From Table 2 above, it is seen that the relationship between these variables was not significant, (χ^2 = 0.95; df = 1; ρ 0.95). This means that no matter the type of agro enterprise venture that an individual is involved in the employment growth remains the same. From Table 2 above the positive employment growth for the cassava producing (69%) and cassava processing (71%) is negligible. The results obtained differ from report by Boateng and Agbe (2018) who identified that an increase in the processing of produce to the market increases employment growth. The variation may be due to the type of product (pineapple) which is a high value export crop while cassava is mainly for local consumption. The following narratives by agro entrepreneurs reveal that;

"I used to help my parents on their farm and now my children are those who help me to produce cassava. I am into subsistence farming and do not need many people to help me in my business. I do not produce for export so a few employees are enough" (Cassava producer from Adawso).

"Most of my clients are consumers and their demand are not that huge so I am able to meet it with the few employees that are at my disposal. Unlike other crops that are for the export who demand more and calls for more employees". (Gari processor from Obosomase)

The above narratives which are a typical of cassava entrepreneurs reveal that agro-entrepreneurs depend on their family which does not change in a short period.

4.3.2 The Contribution of Customer Needs to Employment Growth

From Table 2 above the chi-square result shows that there is a significant relationship between customer needs and employment growth (χ^2 = 8.85; df = 1; ρ 0.01). The result signifies that enterprises that supply cassava products for consumption needs are likely to experience more positive employment growth (75.9%) than enterprises that supply cassava products for raw material needs (58.2%). Logistic regression was further performed to ascertain the effects of customer needs, business information source, educational background expertise, work experience expertise, funds available and access to information on employment growth. The logistic regression model was statistically significant, [χ^2(8) = 43.569]. The model explained 27.8% (Nagelkerke R^2) of the variance in employment growth. However, there was no association between consumption needs and employment growth (β = -.562, ρ .115). These results confirm reports by Boateng and Agbe (2018) who stated that satisfaction of consumer needs of customers will promote employment growth of agro-enterprises rather than the satisfaction of the raw material needs of industries and higher organizations.

4.3.3 The Contribution of Knowledge of Funds Availability to Employment Growth

The chi-square test of independence analysis in Table 2 above shows that there is a significant relationship between knowledge of funds availability and employment growth ($\chi^2 = 9.57$; df = 1; ρ 0.01). Information apparent in Table 2 above shows that entrepreneurs who do not have any knowledge on the availability of funds for enterprise establishment experience a higher proportion (76.8%) of positive employment growth as compared to those who do (53.4%). However, Table 3 indicates that there is no significant association between funds availability and employment growth (β = .576, ρ .120). These results conform to earlier reports by Ngada et al (2014), who stated that the financial acknowledgement of the entrepreneur has a marginal or weak association with employment growth of Small and Medium scale Enterprises (SMEs). On the other hand, it varies from what Boateng and Agbe (2018) identified, which was that entrepreneurs with knowledge of funds availability tend to experience a positive change in employment growth. This suggests that the entrepreneurs may have been depending on personal savings or loans from family and friends as revealed by (Bouazza, Ardjouman, and Abada, 2015; Davidsson, Kirchhoff, Hatemi-j, and Gustavsson, 2002).

4.3.4 The Contribution of Access to Business Information/Information Source to Employment Growth

The chi-square result from Table 2 also reveals that the relationship between access to business information and employment growth is significant ($\chi^2 = 11.81$; df = 1; ρ 0.01). Further, it is observed that entrepreneurs who have no access to business information experience a higher proportion (82.6%) of employment growth than those who have access to business information (59.3%). These results agree with Boateng and Agbe (2018), who contend that there is no

significant relationship between employment growth and access to business information. On the other hand, it disagrees with what Buyansi et al (2014) and Chapman and Slaymaker (2002), who stated that entrepreneurs who have access to business information tend to experience a positive change in employment growth. This contrast could be due to differences in the business environment of the respective enterprises.

With respect to the access to business information sources and its contribution to employment growth, the chi-square results show that there is a significant relationship between the two (χ^2 = 4.51; df = 3; ρ 0.01). It is observed however that the growth rate in terms of employment, is relative depending on the specific source of business information (see Table 2).

From the table 2 we see that entrepreneurs who get their business information from family members or friends have a higher proportion (94.6%) of positive employment growth than those who receive from business advisory centres (66.7%), AEAs/NGOs (59.2%) and those from other sources as well (68.8%). From Table 3, there was a significant association between access to business information and employment growth (β = 1.003, ρ .007). Thus, entrepreneurs who turned out to have access to business information were 3 times more likely to increase their employment growth than entrepreneurs with no access to business information. In terms of the source of information, individuals who gained information from solely media were solely found to be significant (β = 2.195, ρ .006). That is, individuals who happened to gain business information from the media were 9 more likely to increase their employment growth.

4.3.5 The Contribution of Entrepreneurs Expertise to Employment Growth

With regards to how entrepreneurs' expertise affects employment growth, the analysis was conducted in two separate folds namely; Entrepreneurs expertise gained from an educational background and from previous work background. Looking at Table 2, it is observed that there is a significant relationship between entrepreneurs' expertise from an educational background and that of employment growth (χ^2 = 3.71; df = 1; ρ 0.03). Further, it is seen that entrepreneurs who have expertise from educational background experience more positive employment growth (84.2%) than those who do not have (66.7%). This corresponds with the findings of Nitcher and Goldmark (2005) who argued that more education corresponds to the growth of medium scale enterprises. In terms of how entrepreneurs' expertise from previous work background affects employment growth, the chi-square results show that there is no significant relationship (χ^2 = 2.19; df = 1; ρ 0.09) between the two variables.

Table 4: Chi-square Results of Post-Established Enterprise Factors and Employment Growth

Variables	Employment growth		Chi-square results
	No change	**Positive change**	
Human Resource Development			χ^2 = 0.24; ρ value = 0.51; df = 1. NS
Received Training	14(26.4%)	39(73.6%)	
No Training	46(31.3%)	101(68.7%)	
Survival Objectives			χ^2 = 4.65;
Sustainable Objectives	47(35.3%)	86(64.7%)	ρ value = 0.02;
No Sustainable Objectives	13(19.4%)	54(80.6%)	df = 1. Sig
Business Environment			χ^2 = 0.01; ρ value = 0.96;

Favourable	5(29.4%)	12(70.6%)	df = 1. NS
Unfavourable	55(30.1%)	128(69.9%)	
Sociocultural Perception			$\chi^2 = 0.63$; ρ value = 0.33;
Positive Perception	50(31.6%)	108(68.4%)	df = 1. NS
Negative Perception	10(23.8%)	32(76.2%)	

Field Survey, 2019

Table 5: Logistic Regression Results of Post-Established Enterprise Factors and Employment Growth

Variables	Coefficients (β)	*Standard error(B)*	*Significance (p)*
Business Survival Objectives	-.820	.022	.44

4.3.6 The Contribution of Human Resource Development to Employment Growth

The chi-square result from Table 4 above reveals that there is no significant relationship between human resource development and employment growth ($\chi^2 = 0.24$; df = 1; ρ 0.51). Examination of the table, however, reveals that, entrepreneurs who receive training and those who do not receive any form of training both experience positive change (73.6% and 68.7% respectively) in employment growth even though the former slightly edges the latter.

4.3.7 The Contribution of Survival Objectives to Employment Growth

Examination of how the enterprise's survival objectives affect employment growth shows that there is a significant relationship between the two variables ($\chi^2 = 4.65$; df = 1; ρ 0.02). Information apparent in Table 4 above shows that entrepreneurs who do not have sustainable objectives tend to experience a more positive change in employment growth (80.6%) than those who have (64.7%). Logistic regression was further performed to ascertain the effects of business survival

objectives on employment growth. The logistic regression model was statistically significant, [$\chi^2(1) = 5.645$, ρ .018]. The model explained 3.9% (Nagelkerke R^2) of the variance in employment growth. It was also observed that there was a significant negative relationship between business survival objectives and employment growth (β = -.820 ρ .022). Thus, entrepreneurs with no business survival objectives were .441 more likely to gain employment growth than entrepreneurs with survival objectives. This could be attributed to other factors like proper management skills, adequate business information, and proper marketing skills as suggested by De Kok (2011) who argues that about fifty per cent of enterprises could survive after 5 years even though they are well-structured.

4.3.8 The Contribution of Business Environment to Employment Growth

Information apparent in Table 4 above shows that there is no significant relationship between business environment and employment growth ($\chi^2 = 0.01$; df = 1; ρ 0.96). Further, it is observed that entrepreneurs who enjoy a favourable business environment and those who operate in an unfavourable business environment both experience positive change (70.6% and 69.9% respectively) in employment growth. This result refutes the claims of Nitcher and Goldmark (2005) who argued that the overall economic situation has a direct impact on the availability of profitable business opportunities. This could be due to differences in the type of enterprise and entrepreneurs' expertise.

4.3.9 The Contribution of Sociocultural Perception to Employment Growth

The chi-square result from Table 4 above reveals that there is no significant relationship between sociocultural perception and employment growth ($\chi^2 = 0.63$; df = 1; ρ 0.33). This is supported by the claims of the entrepreneurs sampled in this study who indicated that they experienced a positive change in employment growth regardless of the positive or negative perceptions directed towards

their product or enterprise. They experienced growth of 68.4% and 76.2% to positive and negative perceptions respectively. This result disagrees with the claim of Babatunde and Adebisi (2012), who argued that the social trend of a community affects the demand for a company's product and how it operates. This could be attributed to the type of enterprise and its product offering which in this case is cassava.

4.4 The Contribution of Enterprise Factors to the Sales Growth of the Cassava Industry

Table 6: Chi-square Results of Pre-Establishment Factors and Sales Growth

	Sales growth		Chi-square results
	No change	**Change**	
Type of Agro Enterprise			χ^2= 0.12;
Agro producing enterprise	19(19.0%)	81(81.0%)	ρ value = 0.59;
Agro processing enterprise	22(22.0%)	78(78.0%)	df = 1. NS
Customer Needs			χ^2= 15.96;
Consumption need	16(12.0%)	117(88.0%)	ρ value = 0.01;
Raw material need	25(37.3%)	42(62.7%)	df = 1. Sig.
Funds availability for enterprise establishment			χ^2= 0.29;
Available	10(17.2%)	48(82.8%)	ρ value = 0.47;
Not available	31(21.8%)	111(78.2%)	df = 1. NS.
Access to business information			χ^2= 0.35;
Access	21(18.6%)	92(81.4%)	ρ value = 0.44;
No access	20(23.0%)	67(77.0%)	df = 1. NS
Business information sources			
Business advisory centres	6(40.0%)	9(60.0%)	χ^2= 5.721;
Family/Friends	5(13.5%)	32(86.5%)	ρ value = 0.22;
AEA/NGOs	13(18.3%)	58(81.7%)	df = 4. NS
Media	17(22.1%)	60(77.9%)	
Entrepreneur's expertise from an educational background			χ^2= 3.67; ρ value = 0.03;
Expertise	3(7.9%)	35(92.1%)	df = 1. Sig
No Expertise	38(23.5%)	124(76.5%)	

Entrepreneur's expertise from a previous work background			χ^2= 0.00; ρ value = 0.99; df = 1. NS
Expertise	8(20.5%)	31(79.5%)	
No Expertise	33(20.5%)	128(79.5%)	

Field Survey, 2019

Table 7: Logistic Regression Results of Pre Establishment Enterprise Factors and Sales Growth

Variables	Coefficients (β)	*Standard error(B)*	*Significance (p)*
Consumption Need	-1.55	.000	.212
Expert	-1.45	.026	.235

4.4.1 The Contribution of Type of Enterprise to Sales Growth

A chi-square was used to determine the relationship between the type of agro enterprise and sales growth. From Table 6 above, it is seen that the relationship between these variables was not significant, (χ^2 = 0.12; df = 1; ρ 0.59). This means that the type of enterprise or venture of the entrepreneur is not a determining factor in the positive change of sales growth. From the table, it is observed that entrepreneurs who produce cassava to be used as raw materials and those who process it into finished goods both tend to experience a high positive change in sales growth (81.0% and 78.0% respectively). This is partly because of the customer need which varies.

4.4.2 The Contribution of Customer Needs to Sales Growth

From Table 6 above the chi-square result shows that there is a significant relationship between customer needs and sales growth (χ^2 = 15.96; df = 1; ρ 0.01). This indicates that enterprises that supply cassava products for direct consumption are more likely to experience a positive change (88.0%) in sales growth than enterprises that supply cassava products as raw material (62.7%). Logistic regression was further performed to ascertain the effects of customer needs and

educational background expertise on sales growth. The logistic regression model was not statistically significant, [$\chi^2(2) = 23.198$, ρ .000]. The model explained 17.2% (Nagelkerke R^2) of the variance in sales growth. It was noted that there was an association between customer needs and sales growth (β = -1.55, ρ .000). Enterprises that focus on the consumption needs of their customers were found to be .212 more likely to achieve sales growth than companies which focus on the raw materials needs of their customers. The result agrees with Boateng and Agbe (2018) who stated that satisfaction of consumer needs of customers will promote the growth of an enterprise.

4.4.3 The Contribution of Funds Availability to Sales Growth

The chi-square analysis in Table 6 above shows that there is no significant association between funds availability and sales growth ($\chi^2 = 0.29$; df = 1; ρ 0.47). The results agree with the findings of Ngada et al (2014), who stated that the financial acknowledgement of the entrepreneur has a marginal or weak association with employment growth of Small and Medium scale Enterprises (SMEs). Additionally, it is observed that entrepreneurs with available funds and those with no funds both tend to experience a high positive change in sales growth 82.8% and 78.2% respectively. This may be due to the price of the product which is quite affordable for the customers who purchase it. Although most financial arrangements are difficult to access, the government had introduced certain inventive schemes to attract investors with other provisions such as tax holidays especially for enterprises in rural areas. As such, entrepreneurs in such areas can afford to sell their produce at affordable prices to drive sales.

4.4.4 The Contribution of Access to Business Information/Information Source to Sales Growth

The chi-square result from Table 6 reveals that the relationship between access to business information and sales growth is not significant (χ^2 = 0.35; df = 1; ρ 0.44). The results corroborate the findings of Muriithi, Huka and Njati (2014) who argued that interaction with extension service providers has a positive impact on the earnings of entrepreneurs. Further, it is observed that entrepreneurs who have access to business information and those who do not have any form of information both experience a higher percentage of positive change (81.4% and 77.0% respectively) in sales growth.

With respect to the access to business information sources and its contribution to sales growth, the chi-square results show that there is no significant relationship between the two (χ^2 = 5.721; df = 4; ρ 0.22). Further examination of table 6 shows that the source by which entrepreneurs obtain business information does not in any way affect their sales growth. Looking at the table, it is observed that entrepreneurs who receive business information from family or friends 86.5% and NGOs 81.7% differ slightly from those who obtain business information from the media 77.9% and business advisory centres 60%.

4.4.5 The Contribution of Entrepreneurs Expertise to Sales Growth

Looking at Table 6 above it is observed that there is an association between entrepreneurs' expertise from an educational background and sales growth (χ^2 = 3.67; df = 1; ρ 0.03). This corresponds with the findings of Nitcher and Goldmark (2005) who argued that more education corresponds to the growth of medium scale enterprises. Further, it is seen that entrepreneurs who have expertise from educational background experience a more positive change in sales growth 92.1% than those who do not have 76.5%.

In terms of how entrepreneurs' expertise from previous work background affects sales growth, the chi-square results show that there is no significant relationship (χ^2 = 0.00; df = 1; ρ 0.99) between the two variables. Further, it is observed that entrepreneurs enjoyed an equal share of positive change 79.5% each in sales growth regardless of their working experience. This result disagrees with the findings of Mead and Liedholm (1998) and Nitcher and Goldmark (2010) who argued that entrepreneurs with at least seven years of experience tend to expand their companies faster than those without such experience. It is likely the results were obtained in the study area because despite the difference in expertise, the study area accosted all entrepreneurs similar opportunities for growth.

Table 8: Chi-square Results of Post Establishment Factors and Sales Growth

Variables	Sales growth		Chi-square results
	No Change	**Change**	
Human Resource Development			χ^2= 3.00; ρ value = 0.05;
Received Training	6(11.3%)	47(88.7%)	df = 1. NS
No Training	35(23.8%)	112(76.2%)	
Business Survival Objectives			χ^2= 0.41; ρ value = 0.52;
Sustainable Objectives	29(21.8%)	104(78.2%)	df = 1. NS
No Sustainable Objectives	12(17.9%)	55(82.1%)	
Business Environment			χ^2= 25.34; ρ value = 0.01;
Favourable	12(70.6%)	5(29.4%)	df = 1. Sig
Unfavourable	29(15.8%)	154(84%)	
Sociocultural Perception			χ^2= 6.90; ρ value = 0.04;
Positive Perception	39(24.7%)	119(75.3%)	df = 1. Sig
Negative Perception	2(4.8%)	40(95.2%)	

Field Survey, 2019

Table 9: Logistic Regression Results of Post-Establishment Factors and Sales Growth

Variables	Coefficients (β)	*Standard error(B)*	*Significance (p)*
Sociocultural Perception	-1.56	.040	.21
Business Environment	-2.32	.000	.10

4.4.6 The Contribution of Human Resource Development to Sales Growth

The chi-square result from Table 8 above reveals that there is a significant relationship between human resource development and sales growth ($\chi^2 = 3.00$; df = 1; ρ 0.05). The results concur with the claim of Gifford and Nilsson (2014) who contends that human resource development is the most significant factor that affects the growth of an enterprise. Further examination of the table also shows clearly that, entrepreneurs who receive training experience a more positive change (88.7%) in sales growth than those who do not (76.2%). This suggests that the training and development of employees consequently lead to an experienced positive change in sales growth.

4.4.7 The Contribution of Survival Objectives to Sales Growth

The chi-square results show that there is no significant relationship between survival objectives and sales growth ($\chi^2 = 0.41$; df = 1; ρ 0.52). These results refute the claim made by Sharma *et al*., (2010) that environmentally responsible strategies can contribute to competitive advantage and superior financial performance. The foregone is substantiated by the information apparent in Table 5 above, which shows that entrepreneurs with no sustainable objectives experience a more positive change 82.1% in sales growth than those with sustainable objectives 78.2%.

4.4.8 The Contribution of Business Environment to Sales Growth

Information apparent in Table 8 above shows that there is a significant relationship between business environment and sales growth ($\chi^2 = 25.34$; df = 1; ρ 0.01). Logistic regression was further performed to ascertain the effects of sociocultural perception and business environment on sales growth. The logistic regression model was statistically significant, [$\chi^2(2) = 28.502$. ρ .000]. The model explained 20.8% (Nagelkerke R^2) of the variance in sales growth. It was also observed that there was a significant negative relationship between the business environment and sales growth (β = -1.56, ρ .000). Thus, entrepreneurs with an unfavourable business environment were .099 more likely to gain sales growth than entrepreneurs with a favourable business environment. The results concur with Klapper and Love (2010) who held the opinion that enterprise growth is related to country-level indicators of economic growth, the quality of the legal and regulatory environment, and ease of access to finance. Further examination of Table 8, however, shows that entrepreneurs in unfavourable business environments tend to experience a more positive change 84% in sales growth than those who find themselves in favourable business environments 29.4%.

4.4.9 The Contribution of Sociocultural Perception to Sales Growth

The chi-square result from Table 8 reveals that there is a significant relationship between sociocultural perception and sales growth ($\chi^2 = 6.90$; df = 1; ρ 0.04). The finding from Table 9 indicated that there was a significant negative relationship between sociocultural perception and sales growth (β = -1.56, ρ .000). Thus, entrepreneurs with negative sociocultural perception were .211 more likely to gain sales growth than entrepreneurs with positive sociocultural perception. This corroborates the findings of Babatunde and Adebisi (2012), who opined that a company's product and how it operates is affected by trends in society. That is to suggest that, if the perception

of customers in the community is negative towards the enterprise and/or the product, chances are, neither of them is going to do well and the opposite is also true.

4.5 The Contribution of Enterprise Factors to the Technological Growth of the Cassava Industry

Table 10: Chi-square Results of Pre-Established Enterprise Factors and Technology Growth

Variables	Technology growth		Chi-square results
	No change	**Change**	
Type of Agro enterprise			$\chi^2 = 10.51$;
Agro producing enterprise	88(88.0%)	12(12.0%)	ρ value = 0.01;
Agro processing enterprise	68(68.0%)	32(32.0%)	df = 1. Sig
Customer needs			$\chi^2 = 28$; ρ value = 0.01;
Consumption need	119(89.5%)	14(10.5%)	df = 1. Sig
Raw material need	37(55.2%)	30(44.8%)	
Funds availability for enterprise establishment			$\chi^2 = 1.06$; ρ value = 0.22;
Available	42(72.4%)	16(27.6%)	df = 1. NS
Not available	114(80.3%)	28(19.7%)	
Access to business information			$\chi^2 = 3.87$;
Access	78(72.2%)	30(27.8%)	ρ value = 0.03; df = 1.
No access	78(84.8%)	14(15.2%)	Sig
Business information sources			$\chi^2 = 7.76$;
Business advisory centres	11(73.3%)	4(26.7%)	ρ value = 0.05; df = 3. NS
Family/Friends	30(81.1%)	7(18.9%)	
AEA/NGOs	62(87.3%)	9(12.7)	
Media	53(68.8%)	24(31.2%)	
Entrepreneur's expertise from an educational background			$\chi^2 = 1.05$; ρ value = 0.30;
Expertise	32(84.2%)	6(15.8%)	df = 1. NS
No Expertise	124(76.5%)	38(23.5%)	
Entrepreneur's expertise from a previous work background			$\chi^2 = 1.58$; ρ value = 0.14;
Expertise	27(69.2%)	12(30.8%)	df = 1. NS
No Expertise	129(80.1%)	32(19.9%)	

Field Survey, 2019

Table 11: Logistic Regression Results of Pre-Established Enterprise Factors and Technology Growth

Variables	Coefficients (β)	*Standard error(B)*	*Significance (p)*
Consumption Need	2.86	.000	17.50
Production Enterprise	2.97	.000	19.50
Access	-1.39	.005	.25

4.5.1 The Contribution of Type of Agro Enterprise to Technology Growth

A chi-square was used to determine the relationship between the type of agro-enterprise and technology growth. From Table 10 above, it is seen that the relationship between these variables was significant, ($\chi^2 = 10.51$; df = 1; ρ 0.01). Logistic regression was further performed to ascertain the effects of customer needs, type of agro-enterprise and access to business information on technology growth. The logistic regression model was statistically significant, [$\chi^2(3) = 66.328$, ρ .000]. The model explained 43.3% (Nagelkerke R^2) of the variance in technology growth. There was a significant positive relationship between production enterprises and technological growth (β = 2.86, ρ .000). That is, production enterprises were 20 times more likely to gain technological growth than processing enterprises. This suggests that as entrepreneurs expand their businesses from mainly producing farm produce to processing them into finished goods, there is a need for them to migrate from the manual way of operating to mechanical. This reiterates the argument made by Dennis, Aguilera, and Satin (2010) which is that technology improves productivity and leads to the efficient utilization of agricultural resources.

4.5.2 The Contribution of Customer Needs to Technology Growth

From Table 10 above the chi-square result shows that there is a strong relationship between customer needs and technology growth ($\chi^2 = 28$; df = 1; ρ 0.01). The result signifies that enterprises

that supply cassava products for consumption needs are more likely to experience a positive change in technology growth (44.8%) as compared to those who supply cassava for raw material needs (10.5%). From table 11, it was observed that there was a significant positive relationship between consumer needs and technology growth (β = 2.86, ρ .000). Thus, entrepreneurs who focused on the consumption needs of their customers were 17.496 times more likely to obtain technological growth than entrepreneurs who focus on the raw material needs of customers. This can be attributed to the fact that enterprises that supply cassava products for consumption needs usually rely on mechanical technology.

4.5.3 The Contribution of Knowledge of Funds Availability to Technology Growth

The chi-square analysis in Table 10 shows that there is no association between funds availability for enterprise establishment and technology growth (χ^2 = 1.06; df = 1; ρ 0.22). Only a small percentage of entrepreneurs with knowledge on funds availability (27.6%) and those with no knowledge (19.7%) indicated that there was a positive change in technology growth. On the other hand, majority of the entrepreneurs (72.4% and 80.3% respectively) belonging to the two categories namely; knowledge about the availability of funds and no knowledge about the availability of funds both indicated that there was no change in technology growth. This result disagrees with, Iacovone, Ramachandran, and Schmidt (2013), who argued that there is a significant and positive relationship between access to finance and the size of the company.

4.5.4 The Contribution of Access to Business Information/Information Source to Technology Growth

The chi-square result from Table 10 reveals that the relationship between access to business information and technology growth is significant (χ^2 = 3.87; df = 1; ρ 0.03). Further, it is observed

that entrepreneurs who have access to business information experience a more positive change (27.8%) in technology growth than those who do not have (15.2%). More so, findings from Table 11 indicated that entrepreneurs who happened to have access to business information were .250 times more likely to gain technological growth than entrepreneurs with no access to business information. These results concur with the argument of Acs and Audretsch (2010) who opined that access to business information affects entrepreneurs' ability to discover what to produce and also impacts on the technology and processes used in production.

With respect to the access to business information sources and its contribution to technology growth, the chi-square results show that there is a significant relationship between the two (χ^2 = 7.76; df = 3; ρ 0.05). Entrepreneurs who receive business information from the media and advisory centres tend to experience a more positive change (31.2% and 26.7% respectively) in technology growth than those who receive information from family and friends (18.9%) and AEA/NGOs (12.7%). The reason for this result could be based on the kind of business information that is provided by the media and advisory centres. Usually, the information provided centres on proven methods and strategies which entrepreneurs can adopt to help expand their business.

4.5.5 The Contribution of Entrepreneurs Expertise to Technology Growth

In Table 10, it is observed that there was no association between entrepreneurs' expertise from an educational background and technology growth (χ^2 = 1.05; df = 1; ρ 0.30).

In terms of how entrepreneurs' expertise from previous work background affects technology growth, the chi-square results show that there is no significant relationship (χ^2 = 1.58; df = 1; ρ 0.14) between the two variables. This finding disagrees with Nitcher and Goldmark (2005) and

Mead and Liedholm (1998), who argued that the education and experience of entrepreneurs correspond to the growth of the enterprise.

Table 12: Chi-square Results of Post-Established Enterprise Factors and Technology Growth

Variables	Technology growth		Chi-square results
	No Change	**Change**	
Human Resource Development			$\chi^2 = 5.67$;
Received Training	48(90.6%)	5(9.4%)	ρ value = 0.01;
No Training	108(73.5%)	39(26.5%)	df = 1. Sig
Business Survival Objectives			$\chi^2 = 0.65$;
Sustainable Objectives	101(75.9%)	32(24.1%)	ρ value = 0.32; df = 1. NS
No Sustainable Objectives	55(82.1%)	12(17.9%)	
Business Environment			$\chi^2 = 5.29$; ρ value = 0.01
Favourable	9(52.9%)	9(47.1%)	df = 1. Sig
Unfavourable	147(80.3%)	36(19.7%)	
Sociocultural Perception			$\chi^2 = 0.27$; ρ value = 0.46;
Positive Perception	125(79.1%)	33(20.9%)	df = 1. NS
Negative Perception	31(73.8%)	11(26.2%)	

Field Survey, 2019

Table 13: Logistic Regression Results of Post-Established Enterprise Factors and Technology Growth

Variables	Coefficients (β)	*Standard error(B)*	*Significance (p)*
Business Environment	1.04	.048	2.84
Human Resource Development	1.10	.032	3.01

4.5.6 The Contribution of Human Resource Development to Technology Growth

The chi-square result from Table 12 reveals that there is a significant relationship between human resource development and technology growth ($\chi^2 = 5.67$; df = 1; ρ 0.01). This result supports the claim of Glifford and Nilsson (2014) who contend that human resource development is the most

significant factor that affects the growth of an enterprise. Further examination of the table reveals however that, entrepreneurs who do not receive training experience a more positive change 26.5% in technology growth than those who do 9.4% which could be as a result of the type of enterprise and the industry it belongs to. Logistic regression model further fitted to the data and revealed statistical significance [$\chi^2(2) = 11.316$, ρ .003]. The model explained 8.4% (Nagelkerke R^2) of the variance in technology growth. There was a significant positive relationship between training and technological growth (β = 1.043, ρ .048). That is, it was noted that entrepreneurs who received training were 3 times more likely to gain technological growth than entrepreneurs who did not receive training.

4.5.7 The Contribution of Survival Objectives to Technology Growth

Examination of how the enterprise's survival objectives affect technology growth shows that there is relationship between the two variables ($\chi^2 = 0.65$; df = 1; ρ 0.32). This means that the survival objectives of the enterprise do not guarantee a positive change in technology growth. From table 12, the positive change in technology growth for the enterprise with sustainable objectives 24.1% and the one with no sustainable objective 17.9% is negligible.

4.5.8 The Contribution of Business Environment to Technology Growth

The chi-square results show that there is a significant relationship between business environment and technology growth ($\chi^2 = 5.29$; df = 1; ρ 0.01). It was observed that entrepreneurs who operate in a favourable business environment experience a more positive change (47/1%) in technology growth than those who operate in an unfavourable business environment (19.7%). It was also observed from Table 12 that, entrepreneurs with a favourable working environment were 2.839 more likely to gain technological growth than employees with an unfavourable working

environment. This result concurs with Klapper and Love (2010) who argued that the growth of the enterprise is related to economic growth and the quality of the legal and regulatory environment.

4.5.9 The Contribution of Sociocultural Perception to Technology Growth

The chi-square result from Table 12 reveals that there is no significant relationship between sociocultural perception and technology growth ($\chi^2 = 0.27$; df = 1; ρ 0.46). This result refutes the claim made by Babatunde and Adebisi (2012), who argued that the social trend of a community affects the demand for a company's product and how it operates. Moreover, looking at the table it is observed that, entrepreneurs who have had to battle with the negative perceptions of customers still experienced a more positive change (26.2%) in technology growth than those who did not (20.9%) which could be due to the enterprise's business survival objectives.

4.6.1 Growth Factors to the ability to Afford Agricultural Extension Services

Table 14: Chi-square Results of Growth Factors and Agricultural Extension Services

Variables	Agricultural Extension services		Chi-square results
	Not enterprise	**Enterprise**	
Employment Growth			χ^2= 4.25; ρ value = 0.02; df = 1. Sig
No Change	15(25%)	45(75%)	
Positive Change	17(12.1%)	123(87.9%)	
Technology Growth			χ^2= 5.33; ρ value = 0.02; df = 1. Sig
No Change	20(12.8%)	136(87.2)	
Positive Change	12(27.3%)	32(72.7%)	

Sales Growth			χ^2= 4.50; ρ value = 0.03; df = 1. Sig
No Change	11(26.8%)	30(73.2%)	
Positive Change	21(13.2%)	138(86.8%)	

Field Survey, 2019

Table 15: Logistic Regression Results of Growth Factors and Agricultural Extension Services

Variables	Coefficients (β)	*Standard error(B)*	*Significance (p)*
Employment Growth	.88	.026	2.142
Sales Growth	.88	.038	2.410
Technology Growth			

Looking at Table 13, it is seen that there is a strong association between employment growth of enterprise and accessibility to agricultural extension services (χ^2 = 4.25; df = 1; ρ 0.02). Majority of the entrepreneurs (87.9%) who experienced a positive change in employment growth attributed their ability to access agricultural extension services to the enterprise they operate. This was also true for those who indicated that there was no change in employment growth 45 (75%). This shows that entrepreneurs depend solely on the profits derived from their businesses to access agricultural extension services even without experienced growth in employment. This result agrees with Gyenfie (2014) who stated that most entrepreneurs in the rural areas depend on the sales they make from their enterprises to access agricultural extension services. The logistic regression model fitted to the data was statistically significant, [χ^2(1) = 4.854, ρ .028]. The model explained 3.4% (Nagelkerke R^2) of the variance in employment growth. There was a significant positive relationship between enterprise and employment growth (β = 88, ρ .026). That is, it was noted that entrepreneurs who attributed agricultural extension services to the enterprise they operate were

2.412 times more likely to gain employment growth than entrepreneurs who did not attribute agricultural extension services to the enterprise they operate.

From Table 13, it can also be realized that there is a strong association between technology growth and accessibility to agricultural extension services (χ^2= 5.33; df = 1; ρ 0.02). Majority of the entrepreneurs 136 (87.2%) who experienced no change in technology growth said the enterprise they run provided access agricultural extension services. Entrepreneurs 32 (72.7%) who experienced a positive change in technology growth also attributed their accessibility to agricultural extension services to the enterprise they operate. This is to say that, the profits from the enterprise that the majority of the entrepreneurs operate help them to access agricultural extension services whether or not they experience a positive change in technology growth. The result agrees with Anani (1999) said entrepreneurs (farmers) who appreciate the services of AEAs tend to obtain higher farm produce and therefore, find other forms to afford their services.

Logistic regression was further performed to ascertain the effects of agricultural extension services on technology growth. The logistic regression model was statistically significant, [χ^2(1) = 4.061, ρ .044]. The model explained 3.2% (Nagelkerke R^2) of the variance in technology growth. There was a significant positive relationship between enterprise and technology growth (β = .879, ρ .038). That is, it was noted that entrepreneurs who attributed agricultural extension services to the enterprise they operate were 0.392 times more likely to gain technology growth than entrepreneurs who did not attribute agricultural extension services to the enterprise they operate.

Also, from Table 13, it can be seen that there is a significant relationship between sales growth and accessibility to agricultural extension services (χ^2= 4.50; df = 1; ρ 0.03). Majority of the entrepreneurs 138 (86.8%) who experienced a positive change in sales growth once again

attributed their accessibility to agricultural extension services to the enterprise they operate. Majority of the entrepreneurs 30 (73.2) who also indicated that they experienced no change in sales growth also attributed their accessibility to agricultural extension services to the enterprise they operate. The findings agrees with Devas (2001) and Granovetter (1985) who indicated that farmers are able to afford agricultural extension services because they do not always have to pay in cash but also from their farm produce. This means that even though there can be a positive change or no change in the growth of sales, it is still funded from their farm produce or their products. It can thus be concluded that the growth factors of enterprises help entrepreneurs to access agricultural extension services, however, whether or not entrepreneurs experience a positive change or no change at all in enterprise growth factors; it is the profit derived from the operation of these enterprises that are used to fund agricultural extension services.

Logistic regression was further performed to ascertain the effects of agricultural extension services on sales growth. The logistic regression model was statistically significant, [$\chi^2(1) = 4.061$, ρ .044]. The model explained 3.2% (Nagelkerke R^2) of the variance in sales growth. There was a significant positive relationship between enterprise and sales growth ($\beta = .879$, ρ .038). That is, it was noted that entrepreneurs who attributed agricultural extension services to the enterprise they operate were 2.410 times more likely to gain sales growth than entrepreneurs who did not attribute agricultural extension services to the enterprise they operate.

4.6.2 The Contribution of Growth Factors to Improved Health

Table 16: Chi-square Results of Growth Factors and Improved Health

Variables	Payment of medical bills		Chi-square results
	Not enterprise	**Enterprise**	

Employment Growth			χ^2= 1.32; ρ value = 0.25; df = 1. NS
No Change	5(8.3%)	55(91.7%)	
Positive Change	6(4.3%)	134(95.7%)	
Technology Growth			χ^2= 3.73; ρ value = 0.05; df = 1. NS
No Change	6(3.8%)	150(96.2%)	
Positive Change	14(31.8%)	30(68.2%)	
Sales Growth			χ^2= 8.27; ρ value = 0.04; df = 1. Sig
No Change	6(14.6%)	35(85.4%)	
Positive Change	5(3.1%)	154(96.9%)	

Field Survey, 2019

Table 17: Logistic Regression Results of Growth Factors and Improved Health

Variables	Coefficients (β)	*Standard error(B)*	*Significance (p)*
Sales Growth	1.66	.009	5.280

From Table 15, it can be seen that there is no significant relationship between employment growth and improved health (χ^2= 1.32; df = 1; ρ 0.25). Majority of the entrepreneurs 134 (95.7%) who said that they experienced a positive change in employment growth also indicated that they improved on their health through the enterprises they operate. This was also true for the majority of the entrepreneurs 55 (91.7%) who had experienced no change in employment growth. This shows that regardless of an experienced change in the employment growth of the enterprise, entrepreneurs still improved their health from the profit they make in operating the enterprise. This

finding is in agreement with Brautigam (1997) and Devas (2001) who in their research revealed that most rural entrepreneurs depend on their enterprises for good health.

Also, from Table 15, it is observed that there is no significant relationship between technology growth and payment of medical bills (χ^2= 3.73; df = 1; ρ 0.05). Majority of the entrepreneurs 150 (96.2%) who said that they experienced no change in technology also indicated that they improve their health through the enterprise they run. This was also true for the majority of the entrepreneurs 30 (68.2%) who experienced a positive change in technology growth. This result agrees with Gyenfie (2014) who explains that health is a basic need and therefore entrepreneurs will always depend on their business to improve their health. This means that whether or not there is a positive change in technology growth, entrepreneurs still depend on their enterprises to improve on their health.

Table 15 also shows that there is a significant relationship (χ^2= 8.27; df = 1; ρ 0.04) between sales growth and improved health. Majority of the entrepreneurs 154 (96.9%) who experienced a positive change in sales growth attributed their ability to pay medical bills to the enterprise they operate. Majority of the entrepreneurs 35 (85.4%) who experienced no change in sales growth also attributed their ability to pay medical bills to the enterprise they run. This means that the profits from the business entrepreneurs operate helps them to improve their health. Thus, it can be concluded that a positive or a no change in any of the identified growth factors of an enterprise is inconsequential to the entrepreneurs' ability to pay medical bills.

A logistic regression was further performed to ascertain the effects of payment of medical bills on sales growth. The logistic regression model was statistically significant, [χ^2(1) = 4.061, ρ .044]. The model explained 3.2% (Nagelkerke R^2) of the variance in sales growth. There was a significant positive relationship between the payment of improved health and sales growth (β = 1.664, ρ .009).

That is, it was noted that entrepreneurs who paid medical bills were 5 times more likely to gain sales growth than entrepreneurs who did not pay medical bills.

4.6.3 The Contribution of Growth Factors to Social Status Attainment

Table 18: Chi-square Results of Growth Factors and Social Status Attainment

Variables	Attaining social status		Chi-square results
	Not enterprise	**Enterprise**	
Employment Growth			χ^2= 2.14; ρ value = 0.14; df = 1. NS
No Change	7(11.7%)	53(88.3%)	
Positive Change	8(5.7%)	132(94.3%)	
Technology Growth			χ^2= 2.22; ρ value = 0.14; df = 1. NS
No Change	14(9%)	142(91%)	
Positive Change	1(2.3%)	43(97.7%)	
Sales Growth			χ^2= 1.90; ρ value = 0.17; df = 1. NS
No Change	1(2.4%)	40(97.6%)	
Positive Change	14(8.8%)	145(91.2%)	

Field Survey, 2019

From Table 18, it can be observed that there is no significant relationship (χ^2= 2.14; df = 1; ρ 0.14), (χ^2= 2.22; df = 1; ρ 0.14), (χ^2= 1.90; df = 1; ρ 0.17) between the growth of the enterprise and social status attainment when one considers the three selected variables namely employment, technology, and sales growth respectively. In addition, all the entrepreneurs agreed that whether or not there is a change in the growth factors of their enterprise; attainment of asocial status does not depend on

the enterprise. People attain higher social status by holding political and traditional positions (Brautigam, 1997; Gyenfie, 2014; Meagher, 2010; Potts, 2013). It can, therefore, be concluded that enterprise growth on the basis of employment, technology and sales does not affect the entrepreneurs' ability to attain social status.

CHAPTER FIVE

CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

5.0 Introduction

This is the concluding chapter of the study. It presents the conclusions from the findings, recommendations and limitations of the study.

5.1. Conclusions

This study has addressed the contribution of enterprise factors to the growth of cassava enterprises in Akuapem-North Municipality. The growth of the enterprise was assessed on the basis of a positive change in employment, sales and technology growth.

The findings of this study on the contribution of pre establishment factors to the growth of the cassava enterprise in Akuapem-North Municipality revealed that the type of agro enterprise had no association with employment and sales growth but was significantly related to the growth of technology. This result can be attributed to the fact that entrepreneurs in the agro-processing, as compared to their counterparts in the agro producing enterprises employ the use of technology more as they change from doing things manually to mechanical.

It was also revealed that customer needs were significantly related to the employment, sales and technology growth of enterprises. Further analysis proved that agro-enterprises that supplied cassava products for consumption need to experience a more positive change in all the three areas of enterprise growth than their fellow entrepreneurs who produced cassava for raw materials. This can be attributed to the work nature of entrepreneurs in the agro-processing enterprise where more hands and mechanical technology are usually needed to ensure efficiency. With respect to the

growth in sales, this can be attributed to a diversification in product portfolio which invariably leads to a higher possibility of meeting different consumption needs.

In investigating the contribution of knowledge of funds availability to the growth of cassava enterprises in Akuapem-North Municipal Assembly, the findings of this study showed that knowledge about funds availability did not significantly relate with sales and technology growth of the enterprises but had a significant relationship with the employment growth of the enterprises. It is important to note however that, those who had no knowledge on the availability of funds experienced a higher change in employment (76.8%) than those who did (53.4%). This can be ascribed to the fact that entrepreneurs may have depended on personal savings and loans from family and friends for expansion resulting in the employment of more workers.

The assessment of the relationship between employment growth and technology growth of cassava enterprises based on entrepreneurs' access to business information proved significant. There was however no significant relationship between sales growth of the enterprises and access to business information as entrepreneurs who had no access to business information also recorded a high percentage of positive change (77.0%) in growth. This result can be attributed to the type of enterprise the entrepreneurs operate and the sociocultural trend in the district.

This means that entrepreneurs' source of business information does not determine a positive change in sales growth. Thus, an experienced positive change in sales growth can be attributed to any of the other factors like the expertise of the entrepreneur or a combination of some factors.

The findings of the study also showed a significant relationship between entrepreneurs' expertise from the educational background and the employment and sales growth of the enterprises.

Meanwhile, no association was seen between entrepreneurs' expertise from educational background and technology growth. This can be attributed to the type of agro-enterprise and the customer needs that the products they supply satisfy, thus, whether for consumption or raw material.

There was, however, no significant relationship between the entrepreneurs' expertise acquired from previous work and the three growth variables of cassava enterprises in Akuapem-North Municipal Assembly. This means that the entrepreneurs in Akuapem-North Municipality manage their enterprises with knowledge gained from education which helps them to grow the business rather than knowledge that comes with experience.

In investigating the contribution of post establishment factors and enterprise growth revealed that, human resources development to the growth of cassava enterprises in Akuapem-North Municipal Assembly, the findings of this study showed that human resource development was significantly related to sales and technology growth of the enterprise but had no significant relationship with the employment growth of the enterprise. It should, however, be noted that entrepreneurs who did not receive any training experienced a more positive change in technology growth than those who did. This can be attributed to the type of enterprise the entrepreneur established. In that, entrepreneurs who find themselves in the agro-processing enterprise, ceteris paribus, will definitely use mechanical technology in their operation as opposed to manual equipment.

It was also revealed that the availability of sustainable objectives was not significantly related to sales growth and technology growth of enterprises. This may be due to the fact that the impact of sustainable objectives on sales and technology growth are usually not seen in the short term, it

usually takes time (Baumgartner & Ebner, 2010). However, there was a significant relationship between employment growth and enterprises with sustainable objectives. This means that the sustainability strategies and policies of the enterprise contribute to its ability to employ more people.

Also, the relationships between the business environment and the three growth variables were tested. According to the findings, there was a significant relationship between sales and technology growth of enterprises and the business environment variable. Conversely, there existed no significant relationship between employment growth and the business environment. This could be attributed to the type of agro-enterprise and the capacity of the enterprise. In that, it is the business type and its size that would determine the number of workers entrepreneurs employ rather than the business environment.

In the area of the sociocultural environment and its effect on the growth of the enterprise, the findings of the study also revealed that there was no significant relationship between the sociocultural perception of the enterprise and its employment and technological growth. Conversely, a significant relationship was found between sociocultural perception and sales growth of the enterprise. The import of this is that the perception of people about the product that an enterprise produces influences their decision to purchase the product which consequently leads to a growth in sales.

In conclusion, the findings of the study give credence to the fact that both pre and post establishment factors contribute positively to employment growth than the sales and technology growth of the cassava enterprises in Akuapem-North Municipal Assembly.

This study has also addressed how growth factors of enterprises help in the accessibility of improved livelihood outcomes in Akuapem-North Municipal Assembly. The livelihood assets identified in the study were agricultural extension service, payment of medical bills and attainment of social status.

According to the findings of this study, it was revealed that the growth factors of the enterprise had no significant relationship with entrepreneurs' attainment of social status. It can then be concluded that the growth of an enterprise on the basis of technology, sales or employment does not affect entrepreneurs' ability to attain social status.

Also, the findings of the study revealed a significant relationship between technology growth and sales growth as well as sales growth and improved health. There was no significant relationship between employment growth and improved health. A significant relationship with technology signifies that entrepreneurs were able to produce more which improved their capacity to meet the different consumption needs of customers. Further, a significant relationship with sales growth implies entrepreneurs solely depended on the profit derived from sales to improve their health needs.

With respect to the relationship between the growth factors of the enterprise and access to agricultural extension services, a significant relationship was seen between all the three growth variables namely; employment, technology and sales growth. This means that a positive change in all three aspects of the growth of the enterprise allows entrepreneurs or improves the capacity of entrepreneurs to access agricultural extension services.

In a nutshell, it can thus be concluded that, whether or not there is a positive change in the growth factors of the enterprise, the entrepreneurs in Akuapem-North Municipality depend on the profits of the enterprise to improve their health, access agricultural extension services and also improve on their social status.

5.2 Recommendations of the Study

The following recommendations are made from the study

1. The findings of the study revealed that agro enterprises that supplied cassava product for consumption need to experience more positive changes in all three areas of enterprise growth than those that supplied cassava for raw materials. Entrepreneurs in the agro enterprise should, therefore, focus on expanding the enterprise by shifting from just producing cassava for raw materials to processing them to finished goods. Entrepreneurs who are into processing should also expand their business by producing for export and for institutions like schools who need gari for school feeding.

2. The Ministry of Food and Agriculture should endeavour to train entrepreneurs and would-be entrepreneurs since the study identified a relationship between human resource development (training) and technology growth.

3. Much work should be done by the Ministry of Food and Agriculture on awareness creation of the availability of funds to ensure that entrepreneurs take full advantage to fully optimize their operations.

4. Also, future studies can look at conducting a comparative analysis on enterprises in different districts to ascertain the effects of the enterprise factors on employment growth.

5.3 Limitations of the Study

Even though quantitative study gives room for generalization of findings, one should be careful when generalizing based on the findings of this study since the study was limited to just one district.

One limitation of the study is the methodological approach. In that, using the mixed method approach and further applying the triangulation method would have improved the validity of the findings, as triangulation method allows the researcher to test the validity of his or her results through the combination of different research methods.

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APPENDIX

University of Ghana School of Graduate Studies

Department of Agricultural Extension

FIELD RESEARCH QUESTIONNAIRE

RESEARCH TOPIC

THE CONTRIBUTION OF ENTERPRISE FACTORS TO GROWTH AND LIVELIHOOD IMPROVEMENT OF CASSAVA INDUSTRY ENTREPRENEURS IN THE AKWAPIM-NORTH MUNICIPALITY IN THE EASTERN REGION.

Name of Entrepreneur (Optional): ……

A. Entrepreneurs Characteristics

This section set out to get information on the personal characteristics of the entrepreneur
Sex: Male / Female
Age:

Current Educational Level

a. No formal education

b. Primary school

c. Middle school/JHS

d. Senior High School

e. Tertiary education

Location of Agro enterprise: ……

District: ……

This section is designed to obtain information on the time of conceptualization of enterprise idea and the establishment of the agro enterprise.

1. When did you conceive the idea of establishing the agro enterprise?.....
2. After what time period did you establish the agro enterprise?.....
3. Year of establishment of enterprise……
4. Number of years of existence of the enterprise? ……

B. Enterprise Characteristics

This section is designed to obtain information on the characteristics of the agro enterprises

5. What type of agro enterprise do you operate?

   a. Production enterprise

   b. Processing enterprise

6. Indicate the type of crop (s): ……
7. Current number of employees: Permanent …… Casual/Temporal……
8. Is the enterprise registered? Yes-1, No-2, Don't know-3

   a. If Yes, state the year of registration of enterprise: ……

   b. If No, reasons: ……

C. Basic Task Identification

This section is designed to obtain information on the type of enterprise and the needs that the enterprise is established to addressed (Which basic task has the enterprise been established to addressed).

9. What are the products offered to customers? Products: ……
10. What types of customers patronizes the products of the enterprise? Products:
    i. Community members ii. Middlemen iii. Non-community members iv. Wholesalers v. Export market vi. Others……

11. What need does the product meet for the customers?

    i. Consumption need

    ii. Raw material/Industrial need

    iii. Export need

    iv. Any other……

12. What is the nature of demand for the products by the customers?

    i. Daily

    ii. Weekly

    iii. Fortnightly

iv. Monthly

v. Every two months

13. What are the comments or reactions of the customers towards the products that are offered? …….

14. Do you think the type of services/products that are offered to the customers affect the growth of the enterprise? Yes-1, No-2, Don't know-3

D. Supportive Business Environment (funds availability and business information)

This section is designed to obtain information on the business environment and how it contributes the growth of the agro enterprise.

15. Are you aware of financial policies available for the establishment of agro enterprises? Yes-1, No-2, partial-3

16. If yes, which financial policies are you aware of?.....

17. Are there funds available for the establishment of the agro enterprise? Yes-1, No-2, Don't know-3

18. If **YES,** do you think the availability of funds contributed to the growth of the agro enterprise? Yes-1, No-2, Don't know-3
Explain (How)……

19. Do you have access to information on how to establish and manage agro enterprises? Yes-1, No-2, Don't know-3

20. If yes, where do you get the business information from?

a. Business delivery services

b. Media

c. AEAs

b. Family/Friends

c. Any other sources: ……

21. Do you think your access to business information contributed to the growth of the agro enterprise? Yes-1, No-2, don't know-3

E. Entrepreneurs' expertise from educational background

This section is designed to obtain information on how the expertise of the entrepreneur contributes to the growth of the agro enterprise.

22. What was your educational background just before the establishment of the agro enterprise?

a. No formal education

b. Primary school

c. Middle school/JHS

d. Senior High School

e. Tertiary education

23. Did you acquire any expertise from your educational background that helped in the establishment and management of the agro enterprise? Yes-1, No-2, Don't know-3

24. If yes, what expertise did you acquire?

i. Technical skills

ii. Numeracy skills

iii. Writing skills

iv. Managerial skills

v. Communication skills

vi. Any other……

F. Entrepreneur's expertise from previous work background

This section is designed to gather information on the previous work background of the entrepreneur and its contribution to the growth of agro enterprise.

25. Have you worked in any organization (s) before establishing the agro enterprise? Yes-1, No-2, Don't know-3

26. If yes, what type of organization(s) did you worked with?

i. Agro enterprise

ii. Non agro enterprise

iii. Don't know

27. What was the period that you worked with your previous organization?

i. Below One (1) year to five years

ii. Above five years to ten (10) years

iii. Above ten (10) years

28. What position did you hold in your previous work?

    i. Technical position

    ii. Managerial position

    iii. Non-technical and managerial position

29. What experience did you acquire from your previous work?

    i. Numeracy skills

    ii. Technical skills

    iii. Writing skills

    iv. Managerial skills

    v. Communication skills

    vi. Any other……

30. Do you think that the experience you acquired from your previous work influence your expertise in the area of agro enterprise? very influential-1, Influential-2, Somewhat influential-3, uninfliential-4, very uninfluential-5

31. Explain ……...

32. Do you think that the expertise you acquired from your previous work influence the growth of the agro enterprise? very influential-1, Influential-2, Somewhat influential-3, uninfliential-4, very uninfluential-5

33. Explain ……...

34. Apart from expertise from previous education and work place have you obtained expertise that is relevant to enterprise establishment? Yes-1, No-2, I don't know-3

35. If yes, please list them
    …….

G. Business sustainability objectives

This section is designed to obtain information on some of the strategies that the entrepreneur has taken to help in the growth of the enterprise.

36. Does your company have a definition of sustainable development objectives for the Agro enterprise? Yes-1, N0-2, Not really-3

37. How many employees of the enterprise know about the sustainable objectives? All-1, more than half-2, less than half-3, none-4

How often do these people make decisions in the organization? Choose one of the following options.

38. The entrepreneur (Owner) … • Always • Very Often • Sometimes • Rarely • Never
39. Senior managers …. • Always • Very Often • Sometimes • Rarely • Never
40. Field operators … • Always • Very Often • Sometimes • Rarely • Never
41. Customers … • Always • Very Often • Sometimes • Rarely • Never

Which of the following are included in your company's current understanding of Sustainable objectives? Please tick as many as apply to your company. For our company, Sustainable objectives relates to: Tick

	Increase in sales in a financial season
	The use of improved technology
	Increase in the number of employees
	The impact we have on the lives of our employees
	The impact we have on the lives of the people in the communities where we operate
	The interaction we have with local communities (e.g. consultation processes)
	This question has not been considered by our organisation.
	Other (please explain):

G. Business environment

This section is designed to collect information on how government policies are able to affect the growth of the enterprise.

42. How do you rate the different components of business environment of your country for your industry mentioned in the table below?

Activity or action	**Very Poor** (Needs urgent attention)	**Poor** (Doesn't require urgent attention but needs attention in near future)	**Satisfactory** (No need to concern at present but will need attention in future)	**Good** (Doesn't require any attention in future)	**Excellent** (No need to concern at all)
Presence of Quality Infrastructure (Roads, Railways, Airports and ports)					
Tele-communication Facilities (Internet, phone)					
Availability of talent labour					
Access to capital					
Innovation (Ease of getting Patents & Trademarks, research institutions and scientists)					
Availability of universities, training facilities and vocational training centres					

43. How do you rate the technology your firm is using currently?
    a. Outdated
    b. Latest available in the market
    c. Upcoming in Future
    d. No Idea

H. Socio-cultural environment

This section is designed to obtain information on how social factors affect growth of enterprises

44. Please express your level of agreement / disagreement on a five-point scale. (**Where SA= Strongly Agree, A=Agree, UD=Undecided, D= Disagree, SD=Strongly Disagree**.)

Statements on socio-cultural environment					
The successful local entrepreneurship requires a radical change of mentality.	**SA**	**A**	**UD**	**D**	**SD**
The society perceives positively the position of the Agro entrepreneur.	**SA**	**A**	**UD**	**D**	**SD**

The perception of relatives towards agro entrepreneurs is significantly negative.	**SA**	**A**	**UD**	**D**	**SD**
There is a cooperation between local entrepreneurs.	**SA**	**A**	**UD**	**D**	**SD**
I prefer to deal with women entrepreneurs.	**SA**	**A**	**UD**	**D**	**SD**
I prefer to deal with men entrepreneurs.					
I consult my employees before making important decisions.	**SA**	**A**	**UD**	**D**	**SD**
I follow up the works in person	**SA**	**A**	**UD**	**D**	**SD**

I. Human resource management

This section will deal with questions that have something to do the human resource in the organization

45. What HRD training have they received since the establishment of the enterprise?
……

46. How often do you train your employees? ……..……
47. What kind of training do they receive? ……..
48. Please list the topics treated ……
49. How have they impacted on the organization? ……..

J. Enterprise Growth

This section is designed to obtain information on three indicators of enterprise growth

(employment growth, sales growth and technological growth).

50. Employment growth
What is the growth of employment for the past five (5) years?

Year	Number of employees employed	Number of employees that left the enterprise
2014		
2015		
2016		
2017		
2018		

51. Sales growth
What is your sales growth for the past five (5) years?

Year	Cost of production /processing	Volume harvested	Sales of products
2014			
2015			
2016			
2017			
2018			

52. Technological growth (Production and Processing enterprises)
What are the types of technologies used for the following activities for the past five (5) years?

Activity	2014	2015	2016	2017	2018
Peeling					
Grating					
Pressing					
Drying					
Roasting					
Sifting					

Activity	2014	2015	2016	2017	2018
Land preparation					
Planting					
Weeding					
Fertilizer application					
harvesting					

H. Livelihood improvement

This section seeks to find information on how the growth of the enterprise affects the livelihoods of the entrepreneur. The key factors here are able to afford their children's school fees, improve on their social capital, acquire household appliances, and live a food secured life.

53. Have you attained any position as a result of establishing this enterprise? Yes, No
54. If yes, what position? ……
55. Have you attained any position as a result of growth of your enterprise? Yes, No
56. If yes, what position? ……..
57. How many household members do you have .....?
58. Below are various statements on how your business has impacted your livelihood. Please express your level of agreement / disagreement on a five-point scale.
(Where SA= Strongly Agree, A=Agree, UD=Undecided, D= Disagree, SD=Strongly Disagree.)

Statements on how my enterprise has impacted my livelihood					
My status has improved vis-à-vis the society after creating my business.	**SA**	**A**	**UD**	**D**	**SD**
We have organized people to provide a facility to the community (e.g. bridge, house repair, market, church, mosque, school)	**SA**	**A**	**UD**	**D**	**SD**
My business has changed your life positively	**SA**	**A**	**UD**	**D**	**SD**
I am now satisfied with the financial situation of my household	**SA**	**A**	**UD**	**D**	**SD**
I solve issues of conflict in my locality	**SA**	**A**	**UD**	**D**	**SD**
I am able to afford my children's school fees	**SA**	**A**	**UD**	**D**	**SD**
I have been able to purchase household appliances (radio, refrigerator, television, DVD player)	**SA**	**A**	**UD**	**D**	**SD**

L. Physical Capital

This section is designed to obtain information on the kinds of physical assets that the entrepreneur owns or has in his/her possession.

59. What was your annual income a year before you started your enterprise GH₵ …….?
60. What was your annual income last year (2018) GH₵ ……?
61. What is the source of finance used to acquire these assets if you have them?

Items	Source of finance
Radio	
Telephone/Mobile	
Electric fan	
Television	
DVD Player	
Bicycle	
Refrigerator	

62. What is the source of finance in accessing the following facilities?

Facility	
Medical facility	
Electricity supply	
Education (children's fees)	
Agric Extension service	