

**AGRIBUSINESS INCENTIVES AND YOUTH EMPLOYMENT IN NORTHERN UGANDA:
A CASE STUDY OF GULU DISTRICT**

BY

ANTHONY KERWEGI

JAN16/MME/058U

**A DISSERTATION SUBMITTED TO THE SCHOOL OF BUSINESS AND MANAGEMENT IN
PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER'S IN
MONITORING AND EVALUATION OF UGANDA TECHNOLOGY AND MANAGEMENT
UNIVERSITY
(UTAMU)**

September 2016

DECLARATION

I, Anthony Kerwegi, hereby declare that this research report is an original work resulting from my own research efforts and has never been submitted to any other institutions for any award.

Signature: _____ **Date:** _____

Anthony Kerwegi JAN16/MME/058U

APPROVAL

This research report has been written under my supervision and is now submitted in partial fulfilment of the requirements for the award of the degree of Master's in Monitoring and Evaluation with my approval.

Signature: _____ Date: _____

Mr. Dennis K. Omvia

Supervisor

DEDICATION

This piece of work is dedicated to my wife, Christine Mwanja, children - Deborah, Daell and Danyl, for the encouragement, love and support in my career development.

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to my supervisor, Mr. Dennis K. Omvia for his professional guidance offered in preparing this book and all the time and patience to read through this piece of work. My sincere gratitude goes to the lecturers at the University who provided me insights and shared with me their wealth of knowledge unreservedly. Many thanks go to the staff of Techno serve Inc. who participated in the study for their cooperation and provision of information. Heartfelt gratitude goes to Cathy Abalo, for the ideas, encouragement, time, emotional sustenance and constant push they gave me towards the development of this work. My classmates who have patiently endured the challenging times we have gone through with a constant cheer. For all the above and those that I have not specifically mentioned, I request you to accept my sincere appreciation for your support. May God bless you and reward you all.

TABLE OF CONTENTS

DECLARATION	i
APPROVAL	ii
DEDICATION	iii
ACKNOWLEDGEMENTS	iv
LIST OF TABLES	ix
LIST OF FIGURES	x
ABSTRACT.....	x
CHAPTER ONE	1
1.1 Introduction	1
1.2 Background to the Study	1
1.2.1 Historical Background	1
1.2.2 Theoretical Background	2
1.2.3 Conceptual Background	2
1.2.4 Contextual Background	3
1.3 Statement of the Problem	5
1.4 General Objective	6
1.4.1 Specific Objectives	6
1.5 Research Questions	6
1.6 Research Hypotheses	6
1.7 Conceptual Framework	7
1.8 Significance of the Study	10
1.9 Justification of the Study	10
1.10 Scope of the Study	11
1.10.1 Geographical Scope	11
1.10.2 Content Scope	11
1.10.3 Time Scope	11
1.11 Definition of Key Terms and Concepts	12
1.12 Summary of the Chapter	13
CHAPTER TWO: LITERATURE REVIEW	15

2.1 Introduction.	15
2.1 Theoretical Review	15
2.2.1 Becker’s Human Capital Theory.	15
2.2.2 The Recession Push Theories.	16
2.3 Literature Review on Study Variables	16
2.3.1 Technology and Youth Employment.	16
2.3.2 Institutions and Youth Employment.	18
2.3.2 Agribusiness Infrastructure and Youth Employment	20
2.4 Summary of the Chapter	22
CHAPTER THREE: METHODOLOGY	23
3.1 Introduction	23
3.2 Research Design	23
3.3 Study Population	23
3.4 Sample Size Selection and Sampling Techniques	24
3.5 Data Collection Methods	25
3.5.1 Documentary Review Method	25
3.5.2 Questionnaire Survey Method	25
3.5.3 Interview Method	26
3.6 Data Collection Instruments	26
3.6.1 Documentary Review Checklist	26
3.6.2 Interview guide	27
3.6.3 Questionnaires	27
3.7 Validity and Reliability of instruments	27
3.7.1 Validity Test	27
3.7.2 Reliability Test	29
3.8 Procedure of Data Collection	29
3.9 Data Analysis	30
3.9.1 Qualitative Data Analysis	30
3.9.2 Quantitative Data Analysis	30
3.10 Measurement of variables	31
3.11 Ethical Considerations	31
CHAPTER FOUR: PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS	32

4.1 Introduction.	32
4.2 Response Rate.	32
4.3 Demographic Characteristics.	32
4.3.1 Gender Distribution.	33
4.3.2 Respondent Category by Age Group.	34
4.3.3 Tenure in Agribusiness.	35
4.3.4 Respondent Category by Level of Education.	37
4.3.5 Categories of Respondent	38
4.4 Item Mean Analysis of the Study Variables	40
4.4.1 Item Mean Analysis for Agribusiness Incentives	40
4.4.2 Item Mean Analysis for Youth Employment	46
4.5 Empirical Findings	48
4.5.1 The Relationships between the Study Variables.	48
4.6.1 Relationship between Technology and Youth Employment.	49
4.6.2 Agricultural Infrastructure and Youth Employment.	51
4.6.3 Institutional Support and Youth Employment.	52
4.7 Regression Model	53
4.8 Conclusion	55
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS	56
5.1 Introduction	56
5.2 Summary of the Findings	56
5.2.1 Technology and Youth Employment	56
5.2.2 Agricultural Infrastructure and Youth Employment	56
5.2.3 Institutional Support and Youth Employment	57
5.2.4 Agribusiness Incentives and Youth Employment	57
5.3 Discussion of the Findings	57
5.3.1 Technology and Youth Employment	57
5.3.2 Agricultural Infrastructure and Youth Employment	58
5.3.3 Institutional Support and Youth Employment	59
5.4 Conclusions	60
5.4.1 Technology and Youth Employment	60
5.4.2 Agricultural Infrastructure and Youth Employment	60
5.4.3 Institutional Support and Youth Employment	60

5.4.4 Agribusiness Incentives and Youth Employment	61
5.5 Recommendations	61
5.5.1 Technology and Youth Employment	61
5.5.2 Agricultural Infrastructure and Youth Employment	61
5.5.3 Institutional Support and Youth Employment	62
5.6 Limitation of the Study	62
5.7 Contribution of the Study	62
5.8 Recommendation for Further Research	63
REFERENCES	64
APPENDIX I	67
APPENDIX II	67

LIST OF TABLES

Table 1: Sample Size	24
Table 2: Validity	28
Table 3: Reliability analysis.....	29
Table 4: Gender Characteristics of the Respondent	33
Table 5: Age Group Distribution	34
Table 6: Tenure in Agribusiness	36
Table 7: Level of Education	37
Table 8: Category of Respondents	38
Table 9: Technology	40
Table 10: Agricultural Infrastructure.....	43
Table 11: Institutional Support.....	44
Table 12: Youth Employment	47
Table 13: Technology and Youth Employment	49
Table 14: Agricultural Infrastructure and Youth Employment	51
Table 15: Institutional Support and Youth Employment	52
Table 16: Prediction Model.....	54

LIST OF FIGURES

Figure 1: Conceptual Framework	8
Figure 2: Gender Distribution	34
Figure 3: Age Distribution	35
Figure 4: Tenure of Employment	37
Figure 5: Categories of respondents	39

ABSTRACT

The study established the relationship between agribusiness incentive and youth employment in Northern Uganda, taking the case of Gulu district. The study was guided by the following objectives; to examine the influence of technology on youth employment; investigate the effect of agricultural infrastructure on youth employment; and evaluate the influence of institutional support on youth employment. The study used a case study design adopting both qualitative and quantitative approaches. A sample size of 137 respondents was selected using stratified random sampling, purposive sampling and simple random sampling. Data was collected using structured questionnaires and analyzed using Microsoft Excel and SSPS version 20. The major findings of the study revealed that there is a significant relationship between technology and youth employment, and technology was a predictor of youth employment. Likewise, a significant relationship was observed between agricultural infrastructure and youth employment where agricultural infrastructure was seen to be a predictor of youth employment. Further still, the relationship between institutional support and youth employment showed a significant relationship. In conclusion, technology, agricultural infrastructure and institutional support as dimensions of agribusiness incentives, determine youth employment in the district. The study, therefore, recommends that the management of the district should make efforts to ensure that there is adequate use of technology, the required agricultural infrastructure is available and offer institutional support to farmers so as to promote youth employment. The stakeholders in the agricultural sector should develop strategies in line with the study variable relationships to enhance youth employment in local governments.

CHAPTER ONE

1.1 Introduction

This study examined the relationship between agribusiness incentives and youth employment in Northern Uganda taking the case of Gulu district. Agribusiness incentive in this study was conceived as the independent variable while youth employment was the dependent variable. Agribusiness incentives were measured according to the following dimensions: technology (adoption), agribusiness infrastructure and institutional support. Youth employment was measured in terms of productivity, profitability and opportunity. This chapter presents the background to the study, statement of the problem, general and specific objectives, research questions and hypotheses, scope, significance and justification of the study and operational definition of key terms and concepts.

1.2 Background to the Study

1.2.1 Historical Background

Historical trends indicate that from 2000 to 2007, Africa's working-age population grew by 96 million, while jobs grew by only 63 million of which less than 16 million jobs were for the youth during the same period (Africa Economic Outlook, 2012). Despite the strong average growth rate (about 6%) of African economies, the continent has failed to create the number of jobs needed to absorb the youth (African Development Bank). Besides, Africa has the youngest population in the world. Each year 10-12 million of its young people seek to enter the continent's workforce with little success. This highlights the challenge of youth unemployment but it can be envisioned as opportunity for them to

become drivers of new agriculture and agribusiness enterprises for rural transformation (International Institute of Tropical Agriculture, 2015).

1.2.2 Theoretical Background

On the theoretical perspective, the Human Capital Theory asserts that the perceived employability of an individual can be determined by the employee's resource option, particularly the individual's efforts to invest in education and trainings. The Recession Push theories, on the other hand, assume that self-employment is largely opportunistic and argue that self-employed workers are not endowed with special abilities that differentiate them from paid-workers but instead merely respond to the environmental circumstances in which they find themselves at a particular time (Manser & Lin, 1998). The two theories were adopted to explain agribusiness incentives and promotion of youth employment in this study.

1.2.3 Conceptual Background

Conceptually, unemployment is an economic indicator that refers to the number or proportion of people in an economy who are willing and able to work, but are unable to get a job. (www.economicsonline.co.uk). The ILO definition of unemployment comprises three conditions: being without work, currently available for work, and actively seeking for work. This view has, however, been criticized for its rigidity to accommodate people temporarily laid off or those discouraged of job prospects. This study has adopted the ILO definition but also included those who wish to work but are discouraged to actively seek for work. Agribusiness is the sector encompassing farming and farming-related commercial activities, the part of the economy devoted to the production, processing, and

distribution of food and financial institutions that fund them. The United Nations (UN) defines youth as people aged 15 to 24 but this view is contested on grounds of its subjectivity to cultural, institutional, legal and political factors.

When better on-farm jobs are created and agribusiness promoted, then productivity could be boosted. A successful agribusiness sector could provide good returns to enterprises and earnings to youth in employment that could determine their living standards and that of their households as the sector could engage the majority of youth (African Development Bank, 2016). However, institutional credit, improved technologies, skills, markets, logistics and services are the major drivers for agribusiness success (IITA, 2015). Thus, initiatives that make these drivers accessible would spur agribusiness success. In the Ugandan context, agriculture is the primary source of employment that was engaging 73% of the country's labour force in 2005/6 primarily in rural areas, which reduced to 64% in 2008/10, while the sector remains the source of livelihood for the majority of youth (World Bank, 2012).

1.2.4 Contextual Background

Uganda has a high proportion (20%) of young people (15 to 24 years) of the population (World Bank, 2012); however, a significant proportion of them have been unable to access the kinds of economic opportunities (80% unemployed) that lead to sustainable livelihoods (World Bank, 2012).

The Ugandan labour force consists of 9.8 million persons aged between 14 to 64 who were either employed (in paid employment, self-employed and unpaid family workers) or unemployed (without work and available for work). The 2009/2010 Uganda National Household Survey revealed that the unemployment rate was at 4.2 per cent in 2009/2010

compared to 1.9 per cent in 2005/2006. The survey also showed that the general proportion of youth (International definition, 15-24 years) rose from 27 per cent in 2005/2006 to 28% in 2009/2010. On the other hand, the proportion of the youth (national definition, 18-30 years) rose from 44 per cent in 2005/2006 to 48 per cent in 2009/2010. According to a 2008 World Bank Report, Uganda is among the countries with the youngest population and the highest youth unemployment rate of 83%; and to further lend credibility to these findings, in the 2011/2012 budget of Uganda, the Minister of Finance recognised that because of the high levels of unemployment, the Ugandan economy can only absorb 20% of its youth.

This same survey revealed that the labour force in the country was approximately at 11.5 million persons, reflecting an increase of 2 million from 9.5 million in 2005/2006; an annual growth rate of 4.7 per cent. This is above the national population of 3.2 per cent per year. According to the survey, the high growth rate of the labour force poses a challenge to the country since it requires that jobs should be secured to match the increasing labour force.

The survey also used the Labour Force Participation Rate to assess the employment situation in Uganda. Labour Force Participation Rate means the number of persons in the labour force expressed as a percentage of the working-age population. The labour force participation rate for youth (International definition, 15-24 years) rose from 44 per cent in 2005/2006 to 60 per cent in 2009/2010. The Labour Force Participation Rate for the youth as nationally defined, 18-30 years, increased from 77 per cent in 2005/06 to 86 per cent in 2009/10. Consequently, Uganda required about 15.6 million jobs for her active population aged 15-64 years by 2010. But due to the current unemployment rate of over

3.5% and whopping youth unemployment rate of over 32.2% then about 4.37 million people have remained jobless.

There is therefore urgent need to generate economic opportunities that will address the employment demands of Uganda's rapidly growing youth population.

1.3 Statement of the Problem

Recent evidence suggests that despite Uganda's impressive macroeconomic performance over the past 20 years, there has been relatively limited impact on the structure of the labour market. The rate of unemployment stands at 9.4% and it is particularly high among those with higher levels of education (Ministry of Finance Planning and Economic Development (MFPED), 2014). This high unemployment rate has increasingly been discerned as a serious development problem which poses a serious political, economic, and social challenge to Uganda and its leadership (www.population.org). While 76% of households earn income from agricultural production, it is the most important source of income for 42% of households while 26% of households rely exclusively on agriculture (MFPED, 2014). Persistent rural poverty, renewed interest in agriculture and the sense of the urgency of agriculture as a durable option for employment has become an obvious place to look for the solution to the crises of youth unemployment.

Despite the need to engage in gainful employment, the youth are confronted with numerous hurdles to earn livelihoods from agribusiness. The pressure on arable land is intense, posing difficulties in engaging in production in primary agricultural commodities. Additionally, institutional credit, improved technologies, skills, markets, logistics and services for agribusiness success seem to be inaccessible (IITA, 2015). As a

result, opportunities for youth employment in Northern Ugandan could be curtailed. This could plunge the youth to wanton poverty and poverty-related illnesses that could lead to death. This study views incentivization (technology, infrastructure, institutional support and attitude change towards agribusiness as a probable stimulus to address the youth unemployment problem in Northern Uganda which motivated this study.

1.4 General Objective

The general objective of this study was to examine the relationship between agribusiness incentive and youth employment in Northern Uganda taking the case of Gulu district.

1.4.1 Specific Objectives

The specific objectives of this study were:

- i) To examine the influence of technology on youth employment in Gulu district.
- ii) To investigate the effect of agricultural infrastructure on youth employment in Gulu district.
- iii) To evaluate the influence of institutional support on youth employment in Gulu district.

1.5 Research Questions

- i) What is the influence of technology on youth employment in Gulu district?
- ii) How does agricultural infrastructure affect youth employment in Gulu district?
- iii) What is the influence of institutional support on youth employment in Gulu district?

1.6 Research Hypotheses

This study was guided by the following research hypotheses:

H1: Technology has a significant influence on promotion of youth employment.

H2: Agricultural infrastructure has a significant influence on youth employment.

H3: Institutional support has a significant influence on youth employment.

1.7 Conceptual Framework

Conceptual framework depicting the relation between agribusiness motivation and youth employment is shown in Figure 1.

Agribusiness Incentives
(Independent variable)

Youth Employment
(Dependent variable)

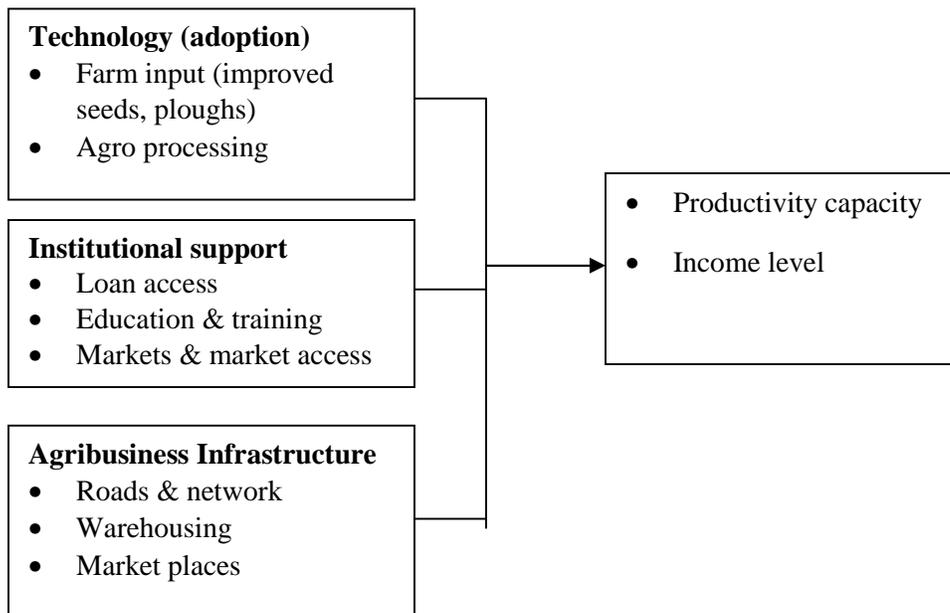


Figure 1: Conceptual Framework

Source: Adopted and modified from Ahnyidoho et al. (2015) “Youth, people, agriculture and employment.”

In this study, agribusiness motivation, the independent variable (proxied by technology institutional support and agribusiness infrastructure), is postulated to promote youth employment proxied by enhanced returns (from enterprise development and wage from employment in agribusiness value chain) and enhanced employment capacity (more youth absorption capacity in the sector). The study variables and dimensions are explained as follows. The variable agribusiness motivation includes technology adoption, agribusiness infrastructure and institutional support which when favourable will boost productivity of primary agricultural product commodities, that will in turn provide raw materials for processed products to boost returns from sales of both primary commodities and/ or processed ones possibly causing improvement of wage rates for employers in the

sector. Alternatively, agribusiness motivation could additionally lead to expansion of the scope of businesses to create more employment opportunities for the youth in the entire agribusiness value chain.

This conceptual framework dwells on the fact that employment opportunities for marginalized youth are intrinsically linked to the general employment situation and incentives. World Bank (2008) in a description of Uganda's employment scenario observed that the labour force in Uganda was growing at a rate of 3.4 per cent per annum resulting in 390,000 new job seekers and yet about 8,120 jobs are available each year. Whereas the national unemployment rate stood at 3.2%, that of the youth stood at a whopping 22.3%. The National Development Plan (2007) has it that the combined unemployment and underemployment accounted for 14% in 2006. Nearly 75% of the working age group was working in the rural areas. Moreover, 50% of the economically active youth are not engaged in income-generating employment (paid employment or self-employment). Most affected is the young female population (14-30 years) capturing our study age bracket of which 70% are engaged in unpaid family work. Further, there is structural segregation of women into low-paying sectors; 50% of employed women are in the three lowest-paying sectors (agriculture, household and mining and quarrying) compared to 33% of the men. In the private sector, women are paid lower wages than the men.

This unfortunate situation is compounded by the fact that subsistence agriculture is not only the major sectors of employment but between 2002 and 2005 accounted for an 11.2% increase in self-employed people. There is a failure to get employment in the non-

agriculture work as explained by a negative growth rate (-9.4%) per annum. The alternative employment sectors especially the industrial sector is underdeveloped. It is largely informal characterized by production of low quality goods, gross deficiencies in technology, lack of indigenous capacity among others. Coupled with the above is the low labour productivity in Uganda compared with neighbouring countries, an aggregation of the state of Uganda's employment situation points a gloomy picture.

1.8 Significance of the Study

This study may be significant to policy makers, academia, agribusiness investors, financial institutions and researchers because the findings of this study could provide valuable information that could be used to inform management, policy and investment decisions on agribusiness and employment promotion. It is envisaged that the findings of this study may extend the frontiers of knowledge. Finally, this study may meet the researcher's partial requirements for the award of a Master's degree (Monitoring and Evaluation).

1.9 Justification of the Study

This study is justifiable as youth unemployment has reached unprecedented levels while government of Uganda has made incessant attempts to find youth unemployment solution without meaningful success. This study is envisaged to unveil the potential for agribusiness as a solution for youth unemployment in Northern Uganda, which finding could also provide a springboard for further investigations to attempt to find a durable unemployment solution in Northern Uganda. Further, Gulu district have their economic mainstay as agriculture and thus provides a gold mine for youth to be self-employed in the different agricultural value chains that are more viable and profitable. Having been a

labour pool for agriculture, supporting agribusiness for youth will enable them have income, increase employment and reduce the incidence of youth migration to competitive urban areas and continue crying unemployment instead of replacing the aging farmers.

1.10 Scope of the Study

1.10.1 Geographical Scope

This study was limited to the geographical boundaries of Gulu district. Respondent samples were drawn based on statistical procedures that were representative of the population attributes in Gulu district.

1.10.2 Content Scope

This study was limited in content to agribusiness and youth employment. It was limited to the research variables and the dimensions selected to describe them namely: Agribusiness as the independent variable (technology adoption, agribusiness infrastructure, and institutional support). In the dependent variable, the study investigated youth employment proxied by productivity, profitability and opportunity.

1.10.3 Time Scope

This study was limited to the period from 2007 to December 2015. This period has been chosen because it was the period from which semblance of security returned in the sub-region following the protracted 20-year armed rebellion by the Lord's Resistance Army (LRA). It was also the period that the Government of Uganda (GoU) and development partners supported returnees to re-settle in their original homes from displacement and then launched of the Peace, Recovery and Development Plan for Northern Uganda (PRDP) and the initiation and rolling out of the Youth Livelihood Programme and

Operation Wealth Creation programmes that support youth enterprise development and entrepreneurship.

1.11 Definition of Key Terms and Concepts

Unemployment: Is an economic indicator that refers to the number or proportion of people in an economy who are willing and able to work, but are unable to get a job; a person in this situation is said to be unemployed. People who are not willing or able to work, for whatever reason, are "economically inactive" and do not count towards unemployment figures. The unemployed are those individuals of working age who are capable of work, and are actively looking for work, but who are not employed (www.economicsonline.co.uk).

Agribusiness: Is the sector encompassing farming and farming-related commercial activities (www.investopedia.com/). It is the part of the economy devoted to the production, processing, and distribution of food and financial institutions funding these activities (Dictionary.com).

Agribusiness Incentives: These are factors that motivates and encourages involvement in agribusiness. The study of **incentive** structures is central to the study of all economic activities (both in terms of individual decision-making and in terms of co-operation and competition within a larger institutional structure). <https://en.wikipedia.org/wiki/Incentive>. In this study Incentives are looked at as critical factors that can promote participation of youth in agribusiness with an aim of promoting employment.

Youth: The ILO definition of unemployment that comprises three conditions: being without work, currently available for work, and actively seeking for work has been

criticized for its rigidity to accommodate peoples temporarily laid off or peoples discouraged of job prospects (Izzi 2013:104). This study has used a more relaxed concept of unemployment that includes not only persons without work, currently available for work and actively seeking for jobs, but also those who wish to work but discouraged to actively seek for work.

Technology adoption: Technology adoption means different things to different people. It is a consistent process is the key to enabling hesitant users to successfully adopt and use technology. Technology adoption happens around us all the time and is the vehicle that allows most people to participate in a rapidly changing world where technology has become central to our lives. Individuals who won't or can't adopt will increasingly limit their ability to participate fully in the financial and convenience benefits associated with technology. <http://www.bridges-to-technology.com>.

Agribusiness Infrastructure. Refers to structures, systems, and facilities that supports the agricultural sector to operate profitably, efficiently and effectively including the services and facilities necessary for its [economy](#) to function. In this study, it's typically a term to characterize the existence or condition of *costly 'technical structures'* such as [roads](#), [bridges](#), storage facilities that promote agriculture and youth employment. en.wikipedia.org.

Opportunity: Refers to a favourable or advantageous circumstance or combination of circumstances. It is also a favourable state of affairs or suitable time. (Eleanor Roosevelt).

1.12 Summary of the Chapter

In summary, the chapter has provided an insight on the background of the study, the purpose of conducting the study, the study objectives and research questions, the

contributions the study was making to the body of knowledge, scope of the study, and organization of the dissertation. This sets the basis for review of existing literature to ascertain the current debate on the study variables.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction.

This chapter presents the review of literature related to the theories thus: Becker's Human Capital Theory and Victor Vroom's Expectancy Theory that have been selected to guide this study. It also reviews literature on the study: variables agribusiness incentives (improved technology, and infrastructure) and promotion of youth employment according the objectives of the study.

2.1 Theoretical Review

2.2.1 Becker's Human Capital Theory

Initially propounded by Becker, Human Capital Theory asserts that the perceived employability of an individual can be determined by the conditions of the labour market that offer different opportunities to the individual and employee's resource options, particularly the individuals efforts to invest in education and training (Becker (1993:7). Becker (1993:7) argues that an individual's human capital development, training and education are the most important investments that one can make because the returns to training investment can be realized in terms of higher income, improved health and acquisition of better career positions. The human capital developed from work experiences and competence development, may contribute to higher earnings, better chance of promotions and acquiring better position. In developing economies, though education for those formerly excluded has been recognized as a means of self-improvement, their opportunities to benefit economically from this inclusion is getting

slim (Jeffrey 2008: 739, Jeffrey 2009: 182). This is because education has often failed to realize the young people's employment expectations and desire for upward social mobility.

2.2.2 The Recession Push Theories

The Recession Push theory assumes that self-employment is largely opportunistic and argues that self-employed workers are not endowed with special abilities that differentiate them from paid-workers but instead are merely responding to the environmental circumstances in which they find themselves in a particular place or at a particular time Manser & Lin, Z, 1998). It would easily follow from this view that self-employment is positively associated with unemployment as it is argued that people who would otherwise prefer to work in paid-employment are “pushed” into establishing their own business ventures because they cannot find suitable paid-employment opportunities. Empirical evidence supporting this hypothesis is abundantly available, at the individual as well as aggregate level (Schuetze (1998) while Acs, Audretsch and Evans (1994) conclude that the self-employment rate increases with the unemployment rate.

2.3 Literature Review on Study Variables

2.3.1 Technology and Youth Employment

In recent times, technology has become the driver of investment in many sectors. However, critical factors pose challenges to their adoption and application. Technology in Agriculture is looked at in different folds: Agro processing and Value addition, seeds and new varieties and ICT. The greatest barrier to the adoption of ICTs by young farmers and agro-entrepreneurs in Africa is the associated costs. Studies indicate that cost of internet is the first constraint cited by farmers' organizations and organizations

supporting young farmers and agro-entrepreneurs (65%), followed by lack of technical ICT skills (62%), weak internet connectivity (56%), lack of personal computers (54%) and unreliable electricity supply (52%). For many other young farmers and agro-entrepreneurs, the problem with ICT adoption is not lack of access but digital illiteracy. In general, there is also low understanding of the relevance and benefit of ICTs applications for increased productivity and profitability by many stakeholders of the sector. These challenges constitute important hindrances to efficient recordkeeping, business management, access to markets and capitalizing upon emerging opportunities. (<http://www.ilo.org/>).

Widespread technology adoption and technological transformation, significant crop diversification, enhanced agricultural intensification, increased access to inputs, and increases in labour productivity all partially explain the changes in total factor productivity in agriculture. However, such changes are largely restricted to pockets with better access to irrigation, stable rainfall and better soil productivity. Studies indicate that neither crop production technologies nor the resource management technologies were able to make an impact on the rainfed areas (Parasarathy, n.d). Further studies need to examine the limiting factors (technology, policy, market, institutional, structural factors) and identify future development strategies, which would help identify a Research and Development role and sustainable intensification for agriculture along with enhanced employment potential (Parasarathy, n.d). Agriculture value chain finance which promotes specialization and enhances productivity, investment and application of modern technology also supports transformation to commercialization of agriculture that underlies the sector's sustainability (ADB, 2013). While technology is very key in

agriculture, GMOs have been very instrumental in increasing productivity and employment; however it has faced a lot of criticism from local farmers as it is seen as a wash away and replacement of the traditional varieties.

2.3.2 Institutions and Youth Employment

The agricultural sector has a huge potential to create jobs but needs to polish its image to attract more young people. To do this, relevant education and training should be provided which should include skills training and entrepreneurship support. Job skills training could help young people compete better in the labour market, while entrepreneurship support could help create and grow their own businesses. In addition, skills mismatch has also been found to disproportionately affect young people coupled with insufficient access to knowledge, information and education (<http://www.ilo.org/>) while skill-intensive sectors are growing slowest in Uganda than in similar countries (MFPED, 2014). Information from literature about this skills deficit in the agribusiness sector in Gulu district is still lacking, which presents a gap that needs to be addressed. Poor and inadequate education tends to limit productivity and the acquisition of skills. There is need for skills development, and to better incorporate agricultural and entrepreneurial skills into rural education. ILO indicates that vocational training institutes do not provide relevant market-oriented skills training for youth but rather continue providing the traditional and general skills for their own survival. While government of Uganda has tried to partner with World Bank, JICA and other funders to improve on access to vocational training, issues of market-oriented courses need to be factored in.

Studies on human capital have shown that an individual's earning is positively related to the level of skills possessed, while unemployment for individuals is negatively correlated

to skills (Becker, 1962:10). Longer time education, increase in labour market and participation has been shown to provide youth greater upward social mobility and autonomy (Naafs, 2012:50). In underdeveloped economies, although education for the marginalized has been recognized as a means of self-improvement, their opportunities to benefit economically from this inclusion (in education) are slim (Jeffrey 2008: 739, Jeffrey 2009: 182) because education has failed to realize the young people's formal employment expectations and desire for upward social mobility. Enterprising youth often lack collateral to establish their own agribusinesses. Most financial service providers are, however, reluctant to provide their services – including credit, savings and insurance to rural youth due to their lack of collateral and financial literacy.

Promoting financial products catered to youth, mentoring programmes and start-up funding opportunities can help remedy this issue (Sanginga, 2015). The Warehouse Receipt System (WRS), a system of financial security is however operational in parts of Uganda including Gulu district. It is actualized by issuing electronic receipts that can be used as collateral for short-term bank credit. Supervision of WRS by the Uganda Commodities Exchange (UCE) has, however, been limited and utilization levels have been low. Yet prospects exist as initiatives have been made by the Ministry of Trade, Industry, and Cooperatives (MTIC) to institute a National Warehouse Receipts Authority under MTIC (Laker-Ojok, 2015) that could improve the functionality of the institution. Market access is important for the effectiveness of agribusiness value chain. Without access to markets, youth will not be able to engage in viable and sustainable agricultural ventures. Access to markets for the youth is becoming even more difficult due to the growing international influence of supermarkets and the rigorous standards of their

supply chains. (Sanginga, 2015). This is compounded by insufficient access to knowledge and information which can hinder the development of entrepreneurial ventures (<http://www.ilo.org/>). To improve market access, a robust market information and intelligence system must exist, be accessible and affordable to key players in order to boost and smoothen agribusiness value chain activities.

2.3.2 Agribusiness Infrastructure and Youth Employment

Uganda's agricultural sector heavily depends on physical structures like roads, bridges, communication networks, storage, and market places that are essential to support the production of goods and services and the distribution of finished products to markets (Laker-Ojok, 2014). Infrastructure is critical to economic performance, growth, and development. However, Oxfam (2013) has observed that during weather-related emergencies, the damage to transport, storage, bridges, fuel supplies, and other vital agriculture-related infrastructure can be a bigger constraint on food availability and a bigger driver of food price increases than the direct impacts on food production. Infrastructure in developing economies like Uganda is poor, the negative impacts of projected climate change could bear devastating effects on agribusiness (Laker-Ojok, 2014). Studies indicate that as much as 58% of the production handicap faced by Ugandan firms can be attributed to infrastructure constraints.

The density of paved roads in Uganda is higher than in any of the neighboring countries. However, a combination of limited capacity, poor coordination, management, and other "institutional" problems result in roads that are not built to high standards which makes them deteriorate quickly (teVelde, 2008a). Physical infrastructure for produce storage and market sales, primarily in the form of warehousing, is concentrated in a few urban and

peri-urban locations in Uganda and a few silo type storage facilities owned by major processors/exporters. Most storage is done at the household level using existing residential structures or traditional woven granaries. There are only seven WRS warehouses licensed by the Uganda Commodity Exchange (UCE) to offer cleaning, drying, and storage services for uniformly graded produce (mostly maize and beans) (Laker-Ojok, 2014). In recent years, the World Food Programme has invested in construction of rural grain stores under farmer management, but ownership, management, and utilization levels of the warehouses remain problematic due to the weak state of the farmer organizations.

Open air markets, with minimal infrastructure, are the places where most farmers sell their agricultural produce and buy essential commodities and household goods. In most rural areas, these markets happen once or twice a week along major transportation routes. Traders travel the market routes with small lorries, carrying consumer goods and acting as middlemen to buy produce for larger traders and agro-processors. Recent moves to construct permanent improved markets have had mixed results as the rental costs are extremely high, thus vendors refuse to use them. Agro-processors depend on private agents who bulk produce in the rural trading centres with simple structures, often without adequate moisture proofing or pest control and do not offer shelling, drying, or cleaning services. Produce is sun-dried on the ground or tarpaulins and is shelled and sorted by hand. Successful infrastructure improvements will increase potential economic growth and go a long way in benefiting the poor. Significant actions in all these areas are underway in Uganda, heralding a positive impact from infrastructure upgrades on the economy and on the well-being of Uganda's citizens (IMF, 2015).

2.4 Summary of the Chapter

Technology, Institution and Agricultural Infrastructure are very key in promoting youth employment. However, literature reviewed in this chapter identified various gaps in Institution, Technology and Agricultural Infrastructure. Under this chapter, a review of extant literature on agribusiness incentives and youth development and the relationships between the dimensions of agribusiness incentives and youth development have been done and conclude that there is need to support access to Technology in all its aspects like ICT, drought resistant varieties, agro processing equipment; while institutional issues reveal that Vocational institutions do not provide market-oriented skills training for the youth, Financial Institutions and Government programmes have high requirements for collateral and high interest levels not manageable by the poor and rural youth. The chapter identified gaps in Agricultural infrastructure that limits access to markets and market places, which are very big factors in supporting incentives for youth employment. This literature made it possible to clearly understudy the dependent and independent variables in the conceptual framework. An analysis of the existing literature on agribusiness incentives and youth development showed that technology, institutional support and agribusiness infrastructure were strong predictors of youth development.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter lays down the methodology that guided the study. It presents the research design, area and population of study, sample size and selection, data collection methods and instruments, procedure for data collection, data analysis, measurement variables and ethical considerations.

3.2 Research Design

The study adopted a case study research design. A case study research design is a research strategy that focuses on exploration of complex phenomena and related context (Yin, 1984). It enables in-depth investigation into the subject under study. A case study is an in-depth study of a particular situation rather than a sweeping statistical survey, a detailed analysis of a person or group from a social or psychological point of view. It is a method used to narrow down a very broad field of research into one easily researchable one (Amin, 2005).

3.3 Study Population

A population is a complete collection of all the elements that are of interest in a particular investigation (Amin, 2005). The study focused on youth aged 18 to 30 years and the accessible population for this study included young people involved in primary agricultural production in two parishes (84), processing (17), produce trading (34) Executive committee of Gulu Farmers Association (11) National Agricultural Advisory

Service staff of Gulu (4) and the District Production and Marketing Directorate (6) and financiers (12).

3.4 Sample Size Selection and Sampling Techniques

The sample size for this study was determined using Krejcie and Morgan Table (1970) as indicated in Table 1.

Table 1: Sample Size

Category of respondent	Population	Sample size	Sampling strategy
Farmer households	84	78	Simple random Sampling
Produce traders	34	15	Simple random Sampling
Processors	17	10	Simple random Sampling
Wholesalers	24	13	Simple random Sampling
Financial institutions	13	7	Stratified sampling
Farmer Association	11	6	Purposive sampling
Directorate of production & marketing	4	3	Purposive sampling
District NAADS Coordinator	6	5	Purposive sampling
Total	193	137	

Source: Survey data

Selection of respondents involved both probability and non-probability sampling techniques. Simple random sampling is a sampling technique in which every element in the population has a known and equal chance of being selected as a subject to minimize bias (Sekaran, 2003). Simple random sampling techniques were used to select farmers. The list of farmers was obtained from the NAADS coordinator/DAO. It formed the sampling frame from which respondents were selected. Each farmer was assigned a serial number and each of these numbers was written on small pieces of paper. The pieces of paper were folded, raffled and placed in a tin. Each piece of paper with numbers corresponding to a farmer was picked one at a time until the sample size of 84 farmers was obtained. Non-probability sampling involved purposive sampling techniques. According to Wiersma and Jurs (2005), purposive sampling involves the selection of

respondents believed to have relevant information on the subject under study. This technique was applicable to traders and processors of produce and government and other institutions to provide information needed for the study.

3.5 Data Collection Methods

The researcher relied on primary and secondary data collection methods to collect data (Sekaran, 2003). The methods that were employed included documentary review, interview, and questionnaire survey. These methods complemented each other as each methodical weakness was supplemented by the other, like documentary review with interview.

3.5.1 Documentary Review Method

Documentary review method refers to the analysis of documents that contain information about the phenomenon under study (Bailey, 1994). Payne and Payne (2004) describe the documentary review method as the technique used to categorize, investigate, interpret and identify the limitations of other methods like findings in previous studies. Data collection involved review of documents to gather secondary data that was used in the study. Documents that were reviewed included the National Census of Agriculture and Livestock and journals.

3.5.2 Questionnaire Survey Method

Questionnaire survey is the collection of data using data collection instrument questionnaires. The survey was based on the fact that data can be collected from a smaller representative set of the population (sample) to infer it on the entire population. Questionnaire surveys have been chosen as one of the methods of data collection because

it is less expensive to use as they focus on a sample rather than the entire elements of subjects (population) and could attract higher response rate (Amin, 2005).

3.5.3 Interview Method

Data collection involved interview method. Interview method refers to the method of data collection through verbal interaction, face-to-face and by telephone (Mugenda & Mugenda, 1999; Sekaran, 2000; Amin, 2005). Non-directive and in-depth interviews were done to cover broad thematic areas of the study. Face-to-face interviews were conducted with key informants in the study like District Director of Production and Marketing and processors.

3.6 Data Collection Instruments

Data collection instruments for the study included documentary review guide, interview checklist (schedule) and questionnaires. The instruments will enable translation of the research objectives into specific questions the responses to which will provide data required to achieve the research objectives. The instruments were used to triangulate information that provided descriptions of characteristics of individuals, institutions or other phenomena under study.

3.6.1 Documentary Review Checklist

The documentary review checklist was one of the methods the researcher used to collect secondary data. It constituted the list of items of information that were obtained from documents, records and other materials. In order to secure measurable data, the items that were included in the schedule were limited to those that could be uniformly secured from a large number of case histories or other records.

3.6.2 Interview guide

Primary data was collected using the interview guide to guide the researcher in conducting interviews. The guide was used for non-directive and in-depth interviews that enabled the researcher to probe (Eyles, 1989) to obtain required information. The guide consisted of questions that were categorized under the objectives of study. It also served as a suggestive reference and prompter. It helped in focusing attention on salient issues relating to the study that were used to collect data from the respondents like a committee member of farmers association and District NAADS coordinator.

3.6.3 Questionnaires

A questionnaire is a set of systematically structured questions used to obtain information. Its main functioned is measurement (Oppenheim, 2006). It is the main data collection instrument in surveys and yields quantitative data. Due to provision for open-endedness, a questionnaire can generate qualitative and exploratory data (Dornyei, 2001). They also standardize questions so that the same questions are asked in the same way to different respondents (Mugenda & Mugenda, 2003). Two sets of questionnaires were developed by the researcher to collect data from patients/ attendants and GRRH employees.

3.7 Validity and Reliability of instruments

In order to make sure that quality and relevant data was collected, the research instruments were tested for validity and reliability as follows:

3.7.1 Validity Test

The validity of the study is concerned with the extent to which data collection instruments accurately measure what they are intended to. Validity is an important

concept in the acceptability of the use of an instrument. Validity refers to the appropriateness of the instrument in collecting the data that is supposed to be collected, while reliability refers to its consistency in measuring whatever it is intended to measure (Amin 2005). Validity was measured by both content and face validity. To establish validity qualitatively, the instruments were given to two experts (supervisors) to evaluate the relevance of each item in the instrument to the objectives and rate each item on the scale of Strongly Disagree (1), Disagree (2), Not Sure (3), Agree (4) and Strongly Agree (5).

The purpose of qualitative research was to describe or understand the phenomena of interest from the participants' eyes. Therefore the researcher allowed the participants to legitimately judge the credibility of the results. Validity was determined by using Content Validity Index (C.V.I). $C.V.I = \text{Total items rated correct} / \text{total number of items in the questionnaire}$. Kathuri & Pal (1993) argue that items with validity coefficients of at least 0.70 are accepted as valid and reliable in research. The measurements were consistent with the theoretical expectation and the data had construct validity. Validity of the instrument was obtained using the Content Validity Index (CVI) as presented in the table below.

Table 2: Validity

Variable	Anchor	Number of items	Content Validity Indices
Technology	5 Point	15	.739
Institutional support	5 Point	13	.811
Agribusiness infrastructure	5 Point	7	.708
Youth development	5 Point	8	.798

Source: Primary data

3.7.2 Reliability Test

The researcher ensured that the instruments minimize random error and hence increase the reliability of the data collected. In order to measure reliability, a score obtained in one item is correlated with scores obtained from other items in the instrument. Cronbach's Coefficient Alphas were therefore computed to determine how items correlate among themselves. To test for the internal consistencies of the scales used to measure the variables, the alphas are expected to score above Cronbach's alpha (α) 0.7 test (Nunnally, 1978).

Table 3: Reliability analysis

Variable	Anchor	Number of items	Cronbach Alpha Value
Technology	5 Point	15	.711
Institutional support	5 Point	13	.703
Agribusiness infrastructure	5 Point	7	.813
Youth development	5 Point	8	.719

Source: Primary data

Reliability test was carried out to test the internal consistency of the research instruments and all variable items were found to be reliable since they had a Cronbach Alpha Coefficient of over 0.70, the threshold according Nunnally (1978).

3.8 Procedure of Data Collection

Documentary evidence was sought from journals, published materials, newspaper articles and through internet sources. Then the researcher obtained a letter of introduction from UTAMU introducing him to the District Director of Production and Marketing. The researcher met the Director and explained the purpose of the study and requested to be permitted to carry out data collection for the research with his support. A preliminary

visit was made to the study area where local council members were met to explain the intended study. Questionnaires, interview guides and documentary review checklist were developed based on research questions and objectives of the study. The questionnaire was pretested on fifteen farmers and accordingly reviewed before data collection commenced.

3.9 Data Analysis

3.9.1 Qualitative Data Analysis

To analyze qualitative data, the researcher organized statements and responses to generate useful conclusions and interpretations based on the research objectives (Sekranan, 2003). Qualitative data analyses for the study objectives involved analysis of themes of interview data. Interview response was reviewed, sorted and classified into related themes. Once the themes were established, data was evaluated and analyzed to determine consistency, credibility and usefulness of the information to support the qualitative data requirements for the study.

3.9.2 Quantitative Data Analysis

Quantitative data analysis involved correlations (Pearson Product Moment Correlations) and linear regressions to determine relationships between items (Mugenda & Mugenda, 1999). Correlation analysis measured the relationships between three dimensions of the Independent Variable and the Dependent variable. Pearson Product Moment coefficient was used to indicate the direction and strength of the relationships, while probability (p) values were used to test the significance of each of the exploratory variables at alpha levels one, five and ten per cent (Amin, 2005). Regression analysis was used to determine the extent to which exploratory variables (agribusiness incentives) affect the dependent variable (promotion of youth employment) (Gujarati, 1999) in the study. The student t–

test was used to test the significance of probability (p) values at one, five and ten per cent levels of significance. The coefficient of determination, R^2 was used to determine the magnitude of the changes in the dependent variable that was explained by the changes in the independent variables (Gujarati, 1999).

3.10 Measurement of variables

To measure the variables the researcher developed a five-point Likert scale (strongly agree=5, agree= 4, not decided = 3, disagree = 2 and strongly disagree =1) to capture respondents' perceptions. The five-point Likert scale was appropriate because it enabled the middle-most position for expression on neutral views to statements made while at the same time it provided a wider range of data set for quantification of qualitative information like strongly agree, equivalent to five.

3.11 Ethical Considerations

The researcher observed ethical values during the study. For instance, he introduced and identified himself and honestly presented to respondents the aims and objectives of the study. He also ensured that respondents voluntarily agree to participate in the study. The researcher ensured that items in the questionnaire and interview guide were constructed carefully so as to evoke the right responses and not to dig into the private lives of respondents outside the scope of the study. The data obtained from individuals was kept confidential. No formal form of respondent identification was disclosed other than references to respondents in form of unique identification numbers. To ensure integrity, inappropriate relationships and related influences were avoided.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter presents the results and discussion organized according to the study objectives. Following analysis of the data collected for this study, the findings are herein presented. Methods that involve graphical illustrations, frequency tabulations and percentage tables have been used in the presentation to reflect statistics that accompany qualitative explanations for better understanding.

4.2 Response Rate

Response rate in [survey](#) research refers to the number of people who answered the survey divided by the number of people in the [sample](#) expressed in the form of a [percentage](#). Therefore, response rate is viewed as an important indicator of survey quality. Amin (2005), asserts that higher response rates ensure more accurate survey results. Questionnaires were distributed to youth and selected stakeholders in agribusiness in Gulu district to which a total of 137 questionnaires were distributed to the selected respondents and 116 usable questionnaires were returned, giving a response rate of 85%

4.3 Demographic Characteristics.

Demographics are current statistical characteristics of a [population](#). Commonly examined demographics include gender, [race](#), age, mobility, home ownership, employment status, and even location (Yuko Oso and Onen, 2009). Demographic profiling is essentially an exercise in making generalizations about groups of people. Demographic information is aggregate and probabilistic information about groups, not about specific individuals. To

present demographic characteristics, frequency tabulations were used to indicate variations of respondents based on gender, age group, tenure of engagement in Agribusiness and level of education. The demographic characteristics were presented basing on the responses from the respondents.

4.3.1 Gender Distribution

Data was analyzed according to gender in order to ascertain the distribution of the responses among females and males. This information was obtained using a questionnaire administered to the respondents and the results are presented in the table below. To present the results on the gender distribution, frequency tabulation was used by the researcher. The results are presented in Table 4 below.

Table 4: Gender Characteristics of the Respondents

Gender	Frequency	Percentage
Male	68	58.6
Female	48	41.4
Total	116	100.0

Source: primary data

From the results in Table 4 above, 58.6% of the respondents with a count of 68 comprised males, whereas females with a count of 48 accounted for 41.4%. From the results it is clear that there is gender distribution among the respondents much as the male respondents were more responsive compared to their counterparts. The high composition of male respondents is a justification that the males were more actively involved in agribusiness activities to earn them a living compared to the females. The reason for this is that agribusiness activities that are performed in the district require a lot of effort, endurance and persistence which favours the males and might be difficult for the females

who bear the burden of social responsibilities of taking care of the children and the family at large. This may explain the low participation of the females in agribusiness in the district. The analysis was generalized to youth male and female because they are the majority and cut across six out of the eight categories of respondents. A summary of the results is provided in Figure 2 below.

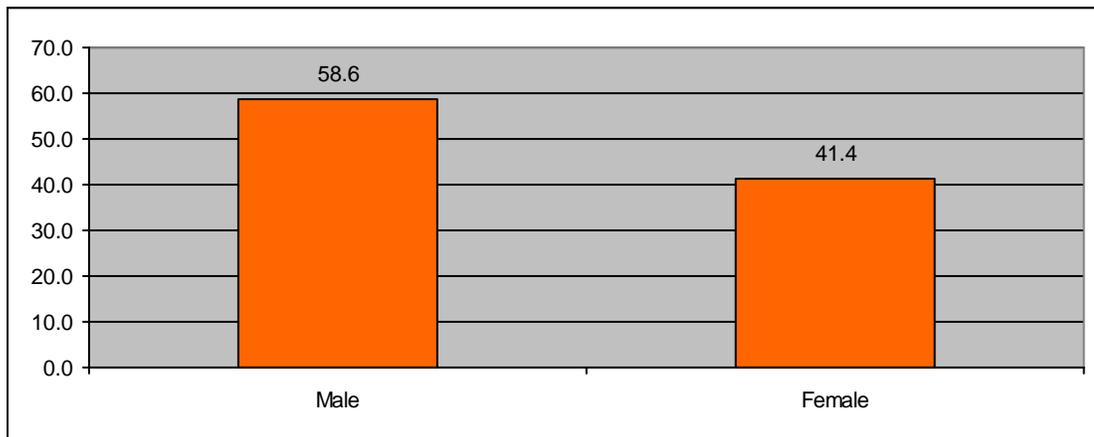


Figure 2: Gender Distribution

4.3.2 Respondent Category by Age Group.

Frequency tabulation was used by the researcher to present the age distribution of the respondents. Table 5 below presents the results:

Table 5: Age Group Distribution

Age group (yrs)	Frequency	Percent (%)
18-24	38	32.8
25-30	59	50.9
31 & above	19	16.4
Total	116	100.0

Source: Primary data

The results in Table 5 revealed that the bulk of the respondents were within age brackets of 25-30 years and 18-24 years with percentages of 50.9% and 32.8% respectively

whereas, 16.4% accounted for those respondents in the 30 years and above age group. This result implies that the majority of the respondents were young adults who were actively involved in agribusiness. The results implied that the composition of the respondents was made up of respondents who were mature enough to understand the importance of agribusiness incentives in enhancing youth development in the district and also to be able to provide the required information for the study. It also implies that the age group of 25 to 30 are young people engaged aggressively in agribusiness because it comprises youthful people with higher level of responsibilities. An abstract of the results is provided in Figure 3 below.

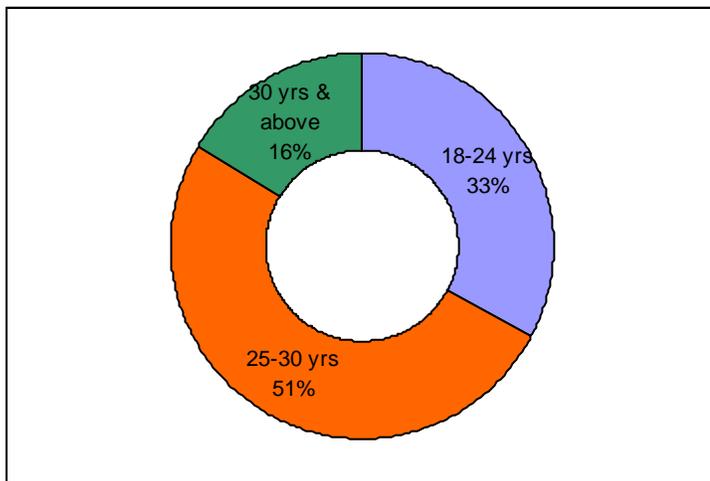


Figure 3: Age Distribution

4.3.3 Tenure in Agribusiness

In order to ascertain the duration spent by the respondents in the agribusiness, the researcher developed four agribusiness tenure categories. While using frequency tabulation, the researcher sought to find out the distribution of the respondents according to the different tenure periods. This information was obtained by administering questionnaires to the respondents. Table 6 below presents the results:

Table 6: Tenure in Agribusiness

	Frequency	Percent
Below 3 yrs	36	31.0
3 – 4 yrs	49	42.2
5 – 10 yrs	23	19.8
Above 10 yrs	8	6.9
Total	116	100.0

Source: primary data

The results from Table 6 above show that 42.2% of the respondents had been in agribusiness for 3.4 years. This implies that the majority of the youths in the district had been in agribusiness for at least more than 3 years for the organization and 31% of the respondents had been in agribusiness for less than 3 years. From the results, 19.8% of the respondents had been in agribusiness for 5-10 years and 6.9% had been in agribusiness for more than 10 years. The results showed that more than 70% of the respondents had been in agribusiness for 3 years or more. The high percentage for respondents under the 3-4 years tenure in agribusiness is due to the fact that the youth in the district had not been in agribusiness for a long time which justifies why the majority of the respondents had a short tenure in agribusiness. The explanation of low tenure in agribusiness may also be explained by political unrest in the region which went on for over 10 years, resulting into the destruction of infrastructure, forcing many in the region to go into IDP camps for security reasons making them less productive while others had to flee to other parts in the country. During this period many did not have active participation in agribusiness which may have accounted for the slow growth of agribusiness in the district and resulted into mass unemployment. A summary of the results is provided in Figure 4 below.

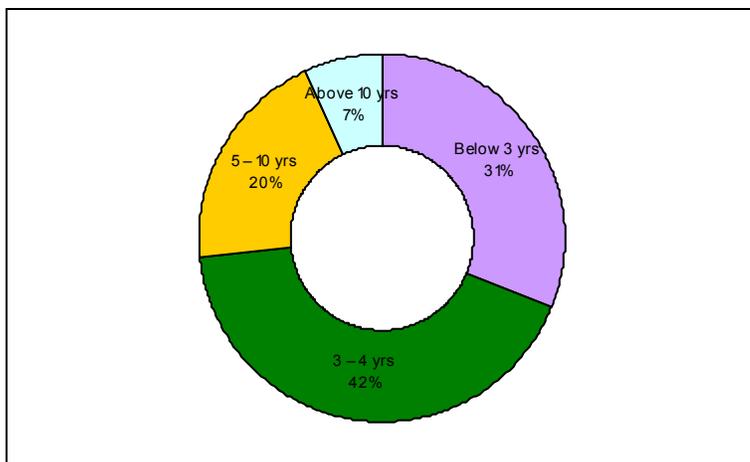


Figure 4: Tenure of Employment

4.3.4 Respondent Category by Level of Education

In order to find out the level of education of the respondents, the researcher categorized this from diploma level to any other types of qualifications. This was done in order to find out if those who had higher qualifications could provide the required information on agribusiness incentives and youth development. Using frequency tabulation, the researcher presented the level of education distribution categories of the respondents.

Table 7 below presented the results.

Table 7: Level of Education

	Frequency	Percentage
Primary level	12	10.3
O-level	16	13.8
A-level	45	38.8
Certificate	26	22.4
Diploma	9	7.8
Degree	5	4.3
Others	3	2.6
Total	116	100.0

Source: primary data

The results from Table 7 above showed that the majority of the respondents (38.8%) were A-level holders, 22.4% were certificate holders, 13.8% had attained O-level education,

10.3% were primary level holders, 7.8% held diploma qualification, 4.3% were degree holders, whereas 2.6 held other qualifications. The high number of A- level, certificate, O-Level holders shows that agriculture is still considered a sector for the uneducated and the rural poor. This is justification that the majority of the people in the district were semi-skilled or unskilled as a result of the drawbacks caused by the civil war that went on for over 10 years forcing many out of school and into IDP camps. Similarly, as a result of the war, most of the infrastructure such as schools, institutes, roads etc were destroyed which necessitated government to first rebuild for the people in the district to benefit from them.

4.3.5 Categories of Respondent

In a bid to target a wide sample of respondents, the researcher developed eight categories of stakeholders and using frequency tabulation, the categories of the respondents were presented as shown in Table 8 below.

Table 8: Category of Respondents

Position	Frequency	Percentage
Farmer (youth)	73	62.9
Produce traders	12	10.3
Agro Processors	7	6.0
Wholesalers	10	8.6
Financial Institutions	5	4.3
Member of farmers associations	4	3.4
District Production & Marketing staff	2	1.7
NAADs staff	3	2.6
Total	116	100.0

Source: primary data

From the results in Table 8 above, the majority of the responses were acquired from youth in farming (62.9%) followed by produce traders (10.3%) and then wholesalers

(8.6%). On the other hand, 6% were into the Agro processing businesses, 4.3% were employees of financial Institutions, 3.4% were members of famers' associations, 1.7% comprised District production and marketing staff and 2.6% were NAADS staff. The fact that information was acquired from youth farmers, produce traders, agro processors, wholesalers, financial institutions, member of farmers associations, district production and marketing staff and NAADS staff, justifies that the responses were provided by stakeholders that provided and or benefited from agribusiness incentives and therefore were able to provide their views regarding the provision of agribusiness incentives and how they affected youth employment in the district. This provides evidence that data was collected from the respondents who possessed the required information for the study and were therefore knowledgeable about the agribusiness incentives and its resultant effect on youth development. A summary of the results is provided in Figure 5 below.

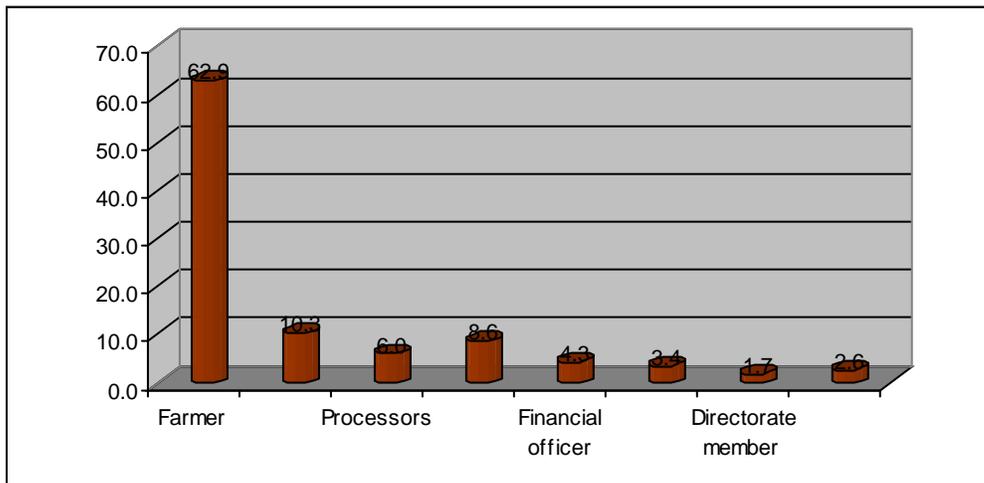


Figure 5: Categories of respondents

4.4 Item Mean Analysis of the Study Variables

4.4.1 Item Mean Analysis for Agribusiness Incentives

In order to assess the level of agreement and disagreement on the different items used to measure the dimensions of agribusiness incentives in the questionnaire, item mean analysis was carried out. The researcher anchored the responses of the respondents on five-point Likert scale ranging from strongly disagree to strongly agree and the results are presented below.

Table 9: Technology

Items	Min	Max	Mean	Std Dev
The cost of value addition equipment is affordable	1	5	2.44	.741
Accessibility of agro processing equipment is difficult for farmers	1	5	3.70	.684
Young farmers possess the required technical skills in agribusiness	1	5	2.70	.684
Quality and drought resistant varieties of seeds are easily accessible	1	5	2.22	.782
Farmers can access internet using their phones	1	5	2.05	.702
Young farmers have access to modern farming implements like tractors, ploughs etc	1	5	2.51	.689
I process my produce before selling	1	5	2.67	.705
Post-harvest losses are not an issue in my harvest	1	5	2.68	.745
Young farmers possess knowledge on how to use ICTs	1	5	2.70	.645
Technology is important in agribusiness	1	5	3.78	.875
Farmers have benefited from the use of ICTs	1	5	2.67	.705
I have access to basic farming implements like hoes, slashers, spades, axes etc	1	5	3.68	.745
Government and private sector provide adequate technical support to youth enterprises	1	5	2.70	.645
Farmers still largely depend on manual labour	1	5	3.78	.875
Manual labour limits commercialization of agriculture and value addition	1	5	3.88	.875

Source: Primary data

Using item mean analysis on technology as a component agribusiness incentives, from the results there was agreement that manual labour undermined commercialization of agriculture and value addition with a mean of 3.88), farmers still largely depended on manual labour indicated by mean of 3.78), With a mean of 3.78, technology is surely important in agribusiness, accessibility of agro processing equipment was difficult for farmers as given by a mean of 3.70 and youth had access to basic farming implements

like hoes, slashers, spades, axes etc indicated by a mean of 3.68. This is justification that much as the youth in the district were aware of the advantages of technology towards their development, they still depended a lot on manual labour and basic farming implements, whereas they were finding it difficult to access agro processing equipment which undermined the value of their produce.

However, there was disagreement by the respondents that the cost of value addition equipment was affordable provided a mean of 2.44, followed by young farmers possessing the required technical skills in agribusiness with a mean of 2.70, quality and drought-resistant varieties of seeds were easily accessible with a mean of 2.22 and farmers could access internet using their phones with a mean of 2.05 which was confirmation that the youth in the district were finding it difficult to access value addition equipment, required skills, better seed varieties and internet. The results also showed that young farmers had no access to modern farming implements like tractors, ploughs etc as indicated by a mean of 2.51), youth did not process their produce before selling, shown by mean of 2.67, a mean of 2.68 showed that post-harvest losses were an issue in their harvest, young farmers did not possess knowledge on how to use ICTs indicated by mean of 2.70, with a mean of 2.67, farmers had not benefited from the use of ICTs and 2.70 that government and private sector did not provide adequate technical support to youth enterprises. This is evidence that more needed to be done by the different stakeholder in the district to ensure that farmers add value to their produce so as not to make losses, receive adequate training on how to use ICTs and also be availed adequate technical support.

The mean results show that the technologies were still under-utilized in the district which affected the farmers' ability to benefit from agribusiness incentives. This could be attributed to inadequate provision of technical support, lack of farm inputs, under-utilization of ICTs among others. The standard deviation results point to the fact that the results could be applied to the farmers in the district. The quantitative results were also supported by the qualitative results which revealed that:

“the youth could engage in production if they were provided with improved seeds or seedlings, could be directly employed if they were availed marketing research information and jobs would be created for them through agro processing” on the other hand, a youth capital fund could help provide the much needed funding”.

With regard to technological challenges being faced, a respondent said,

“counterfeit inputs, maintaining of quality standards, demand for technical skills and knowledge, changing weather patterns, high levels of illiteracy and high interest on borrowed funds”.

Table 10: Agricultural Infrastructure

Items	Mean	Std Dev
The road infrastructure promotes easy movement of farmer produce	3.82	.691
Farmers access markets easily	2.68	.635
Availability of phones allows easy exchange of information for farmers	3.40	.661
Farmers are able to store their produce properly after harvest	2.55	.891
Farmers can easily access markets for their produce	2.66	.782
Farmer production has increased due to the availability of support infrastructure	2.16	.601
Lack of storage facilities for farm produce affects farmers	3.99	.663
Partnering with the private sector to set up storage and processing facilities are a good strategy to deal with post-harvest handling	3.95	.721
The livelihood of many smallholder farmers are often constrained by poor access to markets	3.77	.736

Source: Primary data (using a scale of 1 (Minimum) -5 Maximum)

According to the results in Table 10 above, the findings indicate that road infrastructure promoted easy movement of farmer produce shown with a mean of 3.82, lack of storage facilities for farm produce affected farmers with a mean of 3.99), partnering with the private sector to set up storage and processing facilities was a good strategy to deal with post-harvest handling indicated by a mean of 3.95, and the livelihood of many smallholder farmers were often constrained by poor access to markets (mean=3.77). This is justification that availability of support infrastructure, storage and processing facilities and accessibility to markets were paramount in promoting agribusiness in the district. On the other hand, the results showed that there was disagreement that farmers accessed markets easily (mean=2.68), farmers were able to store their produce properly after harvest (mean=2.55), farmers could easily access markets for their produce (mean=2.66), and farmer production had increased due to the availability of support infrastructure (mean=2.16). This is confirmation that in order for the farmers in the district to benefit from agribusiness incentives, they needed to have easy access to markets, have storage facilities for their produce and have accessibility of support infrastructure such as roads.

From the results, the standard deviation result of less than 1 is proof that agricultural infrastructure determined agribusiness incentives in local governments. Likewise, the standard deviation results provided evidence that the results obtained on agricultural infrastructure could be applied to other local governments in the country.

In support, the qualitative results revealed that the infrastructure initiatives that supported youth employment were:

“availing credit to farmers, providing silos at subsidized rates to farmers, put in place standard markets in each sub-county, carryout product promotions, capacity building for farmers among others”

With regard to the challenges faced with agricultural infrastructure the following were mentioned:

“high cost of transport, low yields, inadequate financing for storage facilities, subsistence farming, lapses in capacity building programs, poor infrastructure, political interference among others”.

The findings reveal that access to markets for youth is becoming even more difficult due to poor access roads, lack of marketplaces as well as the rigorous standards of their supply chains. Youth continue to face additional constraints in accessing markets, due in part to the fact that roads are often inaccessible especially during the rainy season and due to related high transport costs and long distance to markets. Improving access to markets and market information, storage facilities can all provide increased incentives for youth employment by offering particularly significant opportunities for young farmers.

Table 11: Institutional Support

Items	Mean	Std Dev
I have the required training on farming methods	2.09	.573
I have all the required agricultural skills	2.53	.692

I can access any necessary skills to enhance my farming	3.49	.667
I easily access and benefit from government agricultural services	2.57	.737
as a result of farmer skills training, I compete better in the labour market	3.58	.636
Training institutions are easily accessible	2.68	.657
There is sufficient access to market information	2.55	.540
Through government programs, farmers' skills are developed	3.11	.639
I can easily apply learned agricultural and entrepreneurial skills	3.54	.668
I have access to credit facilities from financial institutions	2.48	.743
The credit terms set by financial institutions are favorable	2.57	.660
Before I acquire loans, I am trained on how to manage credit	2.58	.656
I can easily access the markets for my produce	2.38	.657
Government is committed to more funding to make sure that there is increase in the quality of agricultural inputs	2.28	.657
Women and youth are included and enrolled in every agribusiness program	3.48	.657

Source: Primary data (Using Scale 1 minimum -5 maximum)

From the results on institutional support in Table 11 above the respondents agreed that farmers could easily apply learned agricultural and entrepreneurial skills (mean=3.54) and as a result of farmer skills training, they competed better in the labour market (mean=3.58) which is justification that when farmers in the district were availed the required skills, they were able to apply them and even become more competitive in the labour market. The results further revealed that there was disagreement that farmers had the required training on farming methods (mean=2.09), all the required agricultural skills (mean=2.53), easily accessed and benefited from government agricultural services (mean=2.57), had access to credit facilities from financial institutions (mean=2.48) and could easily access the markets for their produce (mean=2.38). This is justification that there was inadequate institutional support provided to the youth in the district which undermined their access to training, credit and markets.

This is supported by the respondents who revealed that that training institutions were not easily accessible (mean=2.68), there was insufficient access to market information (mean=2.55), the credit terms set by financial institutions were unfavorable (mean=2.57),

before farmers acquired loans, they were not trained on how to manage credit (mean=2.58) and government was not committed to more funding to make sure that there is increase in the quality of agricultural inputs (mean=2.28). From the results, the standard deviation results of less than 1 provided evidence that the results obtained on institutional support applied to the farmers in the district, undermined agribusiness and therefore could be generalized on other local governments.

The qualitative results on institutional initiatives in the district showed that,

“there provision of vocational skill training, construction of feeder roads, mass media promoting access to markets, provision of short term livelihood funds, capacity building, product promotions among others”.

With regard to the challenges facing institutional support,

“there were inadequate financing for the youth, most youth did not meet the minimum admission requirements, subsistence operation of the youth, a lot of focus on large scale producing farmers, price fluctuations among others”.

The findings reveal that most financial service providers are reluctant to provide their services – including credit, savings and insurance – to rural youth due to their lack of collateral and financial literacy, among other reasons. Promoting financial products catered to youth, mentoring programmes and start-up funding opportunities can all help remedy this issue. Encouraging youth to group themselves into informal savings clubs can also prove useful in this respect.

4.4.2 Item Mean Analysis for Youth Employment

In order to assess the level of agreement and disagreement on the different items used to measure the dimensions of youth employment in the questionnaire, item mean analysis was carried out. The researcher anchored the responses of the respondents on five-point

Likert scale ranging from strongly disagree to strongly agree and the results are presented below.

Table 12: Youth Employment

Items	Mean	Std Dev
Employment improves my standards of living	3.65	.722
I am able to find employment relevant to my skills sets	3.19	.752
Agribusiness provides a good opportunity for youth employment	3.76	.922
Agribusiness has been promoted by on-farm job creation	3.45	.751
When my business is profitable, I am encouraged to employ more staff	3.57	.870
Increased productivity helps me increase income	3.63	.871
I have practical skills in agribusiness	3.20	.646
The youth have access to the market for their produce	2.44	.607
Agribusiness can be profitable for youth with the right skills	3.88	.800
Youth are trained on the operation and maintenance of farming machinery and equipment	3.41	.707
Youths are trained on how to utilize machinery to improve their agricultural production	3.49	.646

Source: Primary data. (Using Scale 1 minimum -5 maximum)

According to the results on youth employment as shown in the Table above, agribusiness could be profitable for youth with the right skills with a mean of 3.88, followed by agribusiness provided a good opportunity for youth employment with a mean of 3.76, employment improved youth standards of living by a mean of 3.65, increased productivity helped the youth increase income by mean of 3.63, when youth businesses were profitable, they were encouraged to employ more staff as shown by a mean of 3.57, whereas, youth did not have access to the market for their produce with a mean of 2.44. This showed that youth development was encouraged by employment, increased productivity and business return on investment much as the unavailability of markets for produce was still undermining youth development. From the results, the items with standard deviations above 1 showed that there were consistencies in the assessment of

youth employment signifying that there was some level of youth employment in the district much as improvements still needed to be made to enhance youth employment.

According to the qualitative results on youth employment prospects from agribusiness, included “store keeping, sales managers, nursery beds attendants among others”.

In relation to the challenges of youth employment/unemployment, these included;

“attitude towards agribusiness, inadequate land, inaccessibility to information, lack of technical skills, high interest rates, price fluctuations, high illiteracy rates among others”.

4.5 Empirical Findings

The researcher used item means and correlations to present the findings of the study objectives. The study depicted that all the variables of the study were made of components, it was therefore appropriate to conduct a factor analysis to establish the factor structure of the variables in order to generate information for the study on the variables and to reduce the items under each of the variables for finer results in the subsequent analyses involving these variables. [Pearson correlation coefficient](#), also known as r , R , or Pearson's r , a measure of the strength and direction of the linear relationship between two variables that is defined in terms of the (sample) covariance of the variables divided by their (sample) standard deviations was used to present the results of the study objectives. Regression analysis was used to show the results of the combined effect of the components of agribusiness incentives on youth employment.

4.5.1 The Relationships between the Study Variables

In this section, the results that address the research objectives are presented and Pearson's Correlation Test was used to answer the research questions of the study. To investigate

the relationship among the contrasts, a Zero-order correlation table was generated. The Pearson correlation coefficient (r) was employed to establish the relationship between technology, institutional support, agricultural infrastructure and youth employment.

4.6.1 Relationship between Technology and Youth Employment

In order to understand the relationship between technology and youth employment, the Pearson’s correlation test was used. The Pearson correlation coefficient was used because it presents data in a numerical way to quantify the relationship between two variables where the correlation coefficient is determined. Where the correlation coefficient is positive, an increase in the independent variable would result in an increase in dependent variable. However if it is negative, an increase in independent variable would result in a decrease in the dependent variable. Larger correlation coefficients would suggest a stronger relationship between the variables and vice versa. The results are presented in Table 4.12 below.

Table 13: Technology and Youth Employment

Variables		Technology	Youth Employment
Technology	Pearson Correlation	1	.340**
Youth Employment	Pearson Correlation	.340**	1
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Primary data

The results in the table above indicate that technology and youth employment are positively and significantly related variables ($r=.340^{**}$, $p<.01$). These results indicate that technological availability and use resulted into youth employment in regard to productive capacity and income level. Therefore, there is need to promote use of technology in agriculture so as to have a positive effect on youth employment.

Respondents indicated that access to new varieties of seeds, livestock like pigs, Boar goats that are disease, pest and drought resistant will help improve on their yield and subsequently increase income level. They also indicate that ICT services are very important in promoting learnings and market information but lacking among young people. Value addition equipment is also very significant in increasing employment opportunities; however, majority of the respondents noted that access to this equipment is hard given the fact that it is very expensive and not affordable by the youth. This is an indication that when there is use of improved technology by the youth, this will enhance youth employment.

In conclusion, the findings indicate a significant and positive relationship between technology and youth employment. In line with the findings, ADB (2013) revealed that agriculture value chain finance which promotes specialization and enhances productivity and investment and application of modern technology also supports transformation to commercialization of agriculture that underlies the sector's sustainability. For many other young farmers and agro-entrepreneurs, the problem with ICT adoption is not lack of access but digital illiteracy. In general. There is also a low understanding of the relevance and benefit of ICTs applications for increased productivity and profitability by many stakeholders of the sector. Widespread technology adoption and technological transformation, significant crop diversification, enhanced agricultural intensification, increased access to inputs, and increases in labour productivity all partially explain the changes in total factor productivity in agriculture.

4.6.2 Agricultural Infrastructure and Youth Employment

To investigate the relationship between agricultural infrastructure and youth employment, a Zero-order correlation table was generated. Pearson's correlation test was used and the results are presented in Table 14 below.

Table 14: Agricultural Infrastructure and Youth Employment

Variables		Agricultural Infrastructure	Youth Employment
Agricultural Infrastructure	Pearson Correlation	1	.464**
Youth Employment	Pearson Correlation	.464**	1
**: Correlation is significant at the 0.01 level (2-tailed).			

Source: Primary data

Agricultural infrastructure was noted to be positively related to youth employment ($r=.464$, $p\text{-value}<0.01$). These results indicate that when the necessary agricultural infrastructure is in place more employment opportunities are created. Availability of necessary agricultural infrastructure like road network, warehousing and marketplaces, provides incentives for youth employment. Respondents in Bwobo noted that there is not a single storage facility in their area and thus youth are not able to store their produce but sell it off at whatever the prevailing price is. In Lukome, they noted that much as the roads are fairly okay and accessible during the dry season, the rainy seasons are a nightmare, implying that access to the market becomes hard and transport costs higher. A number of the respondents also noted that for those who grow sunflower and soya bean (Oil seeds) the nearest marketplace that offers better prices is in Lira, meaning that at the end of the cycle, they do not make the desired profits. In support of the findings, Oxfam (2013) averred that infrastructure is critical to economic performance, growth, and development. However, during weather-related emergencies, the damage to transport,

storage, bridges, fuel supplies, and other vital agriculture-related infrastructure can be a bigger constraint on food availability and a bigger driver of food price increases than the direct impacts on food production. Physical infrastructure for produce storage and market sales, primarily in the form of warehousing, is concentrated in a few urban and peri-urban locations. The World Food Programme has invested in construction of rural grain stores under farmer management, but ownership, management, and utilization levels of the warehouses remain problematic due to the weak state of the farmer organizations.

4.6.3 Institutional Support and Youth Employment

Correlation analysis was done whereby all responses for each variable; institutional support and youth employment were aggregated into a single index (HRPRA) and (ORGPF) respectively and then Pearson’s Correlation Co-efficient (r) technique was used to assess the nature and magnitude of the relationship. Table 15 gives Pearson’s Correlation Coefficient for the two variables which include; institutional support and youth employment.

Table 15: Institutional Support and Youth Employment

Variable		Institutional Support	Youth Employment
Institutional Support	Pearson Correlation	1	.562**
Youth Employment	Pearson Correlation	.562**	1
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Primary data

According to Table 15 above, the correlation results showed a strong significant relationship between institutional support and youth employment ($r = 0.562, p < .01$). Therefore, there is need to pay attention to the effect of institutional support on youth employment. From the results, the respondents revealed that there was some level of

institutional support much as more needed to be done so as enhance youth employment in the district. The respondents indicated that access to Vocational training Institutes are not easily accessible since the nearest one is about 8 kilometers away and does not offer boarding facilities yet school fees are equally unaffordable by the vulnerable youth. They also noted that where some NGOs like VSO and Save the Children has provided sponsorship, the courses offered often do not match the local market demand for the skills in their villages and thus many youth after completing skills training go back home and still fail to engage in meaningful employment.

Respondents in Ongako Sub County noted that they cannot easily access financial service because they cannot present valid security for the loan that banks are offering. They noted that it is equally not easy to access the Youth Livelihood fund, and that those who access have challenges in paying back the money because they are not adequately prepared on managing and use of the loans.

This is supported by Jeffrey (2009) who revealed that the agricultural sector has a huge potential to create jobs but needs to polish its image to attract more young people. To do this, relevant education and training should be provided which should include skills training and entrepreneurship support. In addition, skills mismatch has also been found to disproportionately affect young people, coupled with insufficient access to knowledge, information and education while skill intensive sectors are growing slowest in Uganda than in similar countries (MFPED, 2014).

4.7 Regression Model

Regression analysis includes any techniques for modelling and analyzing several variables, when focusing on the relationship between a [dependent variable](#) and one or

more [independent variables](#). More specifically, regression analysis helps understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed. Most commonly, regression analysis estimates the [conditional expectation](#) of the dependent variable given the independent variables. Regression analysis is widely used for [prediction](#) and [forecasting](#), where its use has substantial overlap with the field of [machine learning](#). Regression analysis was also used to understand which among the independent variables are related to the dependent variable, and to explore the forms of these relationships. In restricted circumstances, regression analysis can be used to infer [causal relationships](#) between the independent and dependent variables. A regression analysis was carried out to examine the extent to which study variables (technology, agricultural infrastructure and institutional support) predict youth employment. The results are presented in Table 16 below.

Table 16: Prediction Model

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.845	.116		7.290	.000
	institutional support	.548	.040	.532	13.629	.000
	agricultural infrastructure	.108	.045	.114	2.404	.017
	Technology	.094	.044	.101	2.138	.033
Dependent Variable: Youth Employment						
R Square = .459						
Adjusted R Square = .456						
Sig =.000						

Source: Primary data

According to Table 16, technology, agricultural infrastructure and institutional support predict 45.6% of youth employment (Adjusted R Square = .456). The regression model

was significant and thus reliable for making conclusions and recommendations. The most significant predictor of youth employment was institutional support (Beta= .532), followed by agricultural infrastructure (Beta=.114), and then followed by technology (Beta=.101). The findings revealed technology, agricultural infrastructure and institutional support are predictors of youth employment. Providing evidence that for the district to enhance productivity capacity and income levels there is need to ensure that there is adequate technological use, availability of agricultural infrastructure and institutional support. This implies that improving agribusiness incentives in the district would result into improved youth employment.

4.8 Conclusion

This chapter has analyzed the contribution of agribusiness incentives to youth employment. The findings indicated that technology, agricultural infrastructure and institutional support were strong predictors of youth employment, accounting for 45.6% of the change in youth employment in the district. This provided a basis for chapter five which presents the summary of the findings, discussion, conclusions and recommendations.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussion, conclusions, and recommendations arising out of the research findings in chapter four and suggests areas for further study.

5.2 Summary of the Findings

The study sought to examine the relationship between agribusiness incentives and youth employment. Data was collected by way of a self-administered questionnaires and the data was analyzed with use of the Statistical Package for Social Scientists which was used to present results in tabulations of frequencies, factor analysis, correlations and regression analysis. The majority of the respondents belonged to the 26-30 year age group, whereby the majority of the respondents were male. With regard to period of employment, the majority had been employed for a period of 3-4 years and were holders of other qualifications. From the results, most of the respondents were acquired from farmers.

5.2.1 Technology and Youth Employment

According to the correlational findings of the relationship between technology and youth employment, the findings revealed a positive and significant relationship between technology and youth employment.

5.2.2 Agricultural Infrastructure and Youth Employment

The correlational findings revealed a positive and significant relationship between agricultural infrastructure and youth employment. This indicates that youth employment was determined by their ability to access the required agricultural

infrastructure that support agribusiness including training in collective marketing, bulking, good roads, provision of storage facilities like warehouses and low-cost cylos.

5.2.3 Institutional Support and Youth Employment

The findings validate that institutional support was significant in determining youth employment because they revealed a significant and positive relationship between the two variables. It is evident that access to financial services, market-oriented Vocational skills and adequate market information are very important in promoting youth employment.

5.2.4 Agribusiness Incentives and Youth Employment

In line with the correlational findings, the regression analysis findings revealed that the dimensions of agribusiness incentives; technology, agricultural infrastructure and institutional support predicted youth employment in the district.

5.3 Discussion of the Findings

A discussion of the findings is presented in this section according to the study objectives. Here the researcher assessed how the findings of the study were in agreement or disagreement with extant literature that was reviewed.

5.3.1 Technology and Youth Employment

The findings showed that technology had a positive significant effect on youth employment. The findings indicated that technological availability and use that resulted into youth employment were paramount in determining the youths' productivity capacity and income level in the district. Therefore, promotion of use of modern

technology in agriculture will have a positive effect on youth employment; subsidizing agro processing equipment will also ensure that youth add value to their products and sell them at better prices as well as introduction and promotion high value and resistant varieties of crops and animals as a way of increasing employment. In line with the findings, ADB (2013) revealed that agriculture value chain finance which promotes specialization and enhances productivity and investment and application of modern technology also supports transformation to commercialization of agriculture that underlies the sector's sustainability. For many other young farmers and agro-entrepreneurs, the problem with ICT adoption is not lack of access but digital illiteracy. In general, there is also a low understanding of the relevance and benefit of ICT applications for increased productivity and profitability by many stakeholders of the sector. Widespread technology adoption and technological transformation, significant crop diversification, enhanced agricultural intensification, increased access to inputs, and increases in labour productivity all partially explain the changes in total factor productivity in agriculture.

5.3.2 Agricultural Infrastructure and Youth Employment

From the findings of the study agricultural infrastructure was found to have a positive and significant effect on youth employment. The findings attest that when youth have adequate access to the necessary agricultural infrastructure, employment opportunities will be enhanced giving an indication that when there is agricultural infrastructure like availability of good all weather, access roads and network, warehousing and low cost storage facilities and market places, then there will be youth employment in the district. In support of the findings, Oxfam (2013) averred that

infrastructure is critical to economic performance, growth, and development. However, during weather-related emergencies, the damage to transport, storage, bridges, fuel supplies, and other vital agriculture-related infrastructure can be a bigger constraint on food availability and a bigger driver of food price increases than the direct impacts on food production. Physical infrastructure for produce storage and market sales, primarily in the form of warehousing, is concentrated in a few urban and peri-urban locations. The World Food Programme has invested in construction of rural grain stores under farmer management, but ownership, management, and utilization levels of the warehouses remain problematic due to the weak state of the farmer organizations.

5.3.3 Institutional Support and Youth Employment

The findings on the effect of institutional support on youth employment showed a positive and significant relationship between the two as market-relevant skills gaps and access to finance and markets can be addressed by strengthening institutional support as a medium for empowering youth for employment. For example if more financial Institutions provide interest and security free agricultural loans with less stringent requirements, more youth will be engaged in commercial and profitable agriculture. This is supported by Jeffrey (2009) who revealed that the agricultural sector has a huge potential to create jobs but needs to polish its image to attract more young people. To do this, relevant education and training should be provided which should include skills training and entrepreneurship support. In addition, skills mismatch has also been found to disproportionately affect young people coupled with insufficient access to knowledge, information and education while skill intensive sectors are growing slowest in Uganda than in similar countries (MFPED, 2014).

5.4 Conclusions

The conclusions were drawn basing on the research objectives of the study as presented below:

5.4.1 Technology and Youth Employment

The findings substantiate that technology was an essential part of youth employment. This implies that a positive change in technology would translate into enhanced youth employment. This is justification that technology was paramount in promoting youth employment in the district.

5.4.2 Agricultural Infrastructure and Youth Employment

The findings on objective two revealed that agricultural infrastructure has a positive significant effect on youth employment. The positive significant relationship between agricultural infrastructure and youth employment is justification that to attain desirable youth employment, there was need to provide the youth with necessary agricultural infrastructure such as roads and networks, warehousing and marketplaces which would in turn improve agribusiness and in so doing improve youth employment.

5.4.3 Institutional Support and Youth Employment

The findings confirmed that institutional support was a determining factor of youth employment which is implication of management's willingness to promote loan access, Vocational education and training, and markets and market access would enhance youth employment in the district.

5.4.4 Agribusiness Incentives and Youth Employment

The regression analysis findings revealed that agribusiness incentives determined the change in youth employment in the district which was implication that technology, agricultural infrastructure and institutional support were paramount in improving youth employment in the district.

5.5 Recommendations

In the light of the research findings, the following recommendations are made:

5.5.1 Technology and Youth Employment

The findings revealed that technology has a significant relationship with youth employment. Therefore, the management of the district in order to promote agribusiness should subsidize agricultural machinery, ensure agricultural information availability, allow access to improved systems of mechanization, provide training to the youth in relevant agribusiness enterprises and make improvements in the handling and storage of agricultural produce. Through provision of the required technology, this will enhance the agribusiness and in turn lead to enhanced youth employment.

5.5.2 Agricultural Infrastructure and Youth Employment

The study findings revealed that agricultural infrastructure has a significant relationship with youth employment. For this reason, there should be initiatives to revitalize and form new agricultural cooperatives to reduce costs, encourage the youth to venture into mechanized farming, provide the youth low interest loans and establish demonstration farms for training the youth. Similarly, there is need to ensure that the road network in the district is properly maintained and set up community silos for storage of agricultural produce.

5.5.3 Institutional Support and Youth Employment

The findings revealed that institutional support has a significant association with youth employment. Therefore, there is need to venture into setting up more agro-based industries to employ the youth, increasing access to market oriented Vocational Education and Training so as to acquire the necessary skills, promote contract farming to regulate pricing of commodities, promote value addition by putting in place model Bulking and processing centres, encourage market information sharing among others.

5.6 Limitation of the Study

- i) Bias from the respondents to simply fill the questionnaires to please the researcher. The researcher conducted a face to face interaction to clarify the purpose and objective of the study.
- ii) The scales in the questionnaire were adopted from other studies conducted in different environments from that of Uganda, which is likely to cause bias. The researcher involved experts in the field of agriculture to moderate the scales adapted to fit the local environment.
- iii) Fear of giving confidential information as viewed by the organization they work for. Here the researcher assured them of at most good faith with supporting documents for undertaking the study.
- iv) The way the questionnaire was designed limited additional response. This was however mitigated through prompting the respondents to give more information.

5.7 Contribution of the Study

- i) The findings on technology and youth employment showed that the study provided information on how technology determined youth employment in the

form of farm inputs such as improved seeds, ploughs; and agro processing which in turn resulted into enhanced productivity capacity and increase in income levels among the youth in the district.

- ii) From the findings on the relationship between agricultural infrastructure and youth employment, the study was able to establish the relevance of agricultural infrastructure with regard to road network, warehousing and market places which were important in promoting increase of productive capacity and income levels among the youth in the district.
- iii) The findings on the effect of institutional support and youth employment revealed that the function played by institutional support in the form of loan access, education and training; and markets and market access were paramount in the determination youth productive capacity and income levels in the district.

5.8 Recommendation for Further Research

- i) This study concentrated on technology, agricultural infrastructure, institutional support and youth employment in Gulu district. Future research should attempt to widen the scope of the study to cover other districts so as to ascertain the findings.
- ii) The study adopted a cross sectional design which studied the state of affairs in Gulu district at a point in time. To study the true nature and quality of the relationship between agribusiness incentives and youth employment, a longitudinal study could provide better results to the study.
- iii) From the findings, the regression analysis revealed that the model could only explain 45.6% in variance of youth employment. Hence a study should be carried out to look into other factors which were not part of the model.

REFERENCES

- Acs, Z. J., Audretsch, D. B. & Evans, D., S. (1994). Why Does the self-employment rate vary across countries and over time? Discussion Paper No. 871, Centre for Economic Policy Research.
- African Development Bank (2013). Agricultural value chain financing (AVCF) and development for enhanced export competitiveness. African Development Bank Group.
- [African Economic Outlook \(2015\)](#). Agribusiness for Youth Employment. Opened the 50th AfDB Annual Meetings in Abidjan on Monday, May 25. Joint AfDB-OECD-UNDP publication: empowering youth, unlocking domestic financing and modernizing economies. Wednesday, 27 May 2015 – 10:00 – 12:00.
- Agriculture and youth employment: The missing link. Youth entrepreneurship. Accessed at: <http://www.ilo.org/>.
- Amin, M., E. (2005). *Social science research: Conception, methodology and analysis*. Kampala: Makerere University.
- Becker, G.S. (1962). Investment in Human Capital. *The Journal of Political Economy* 70(5):9-4
- Becker, G.S. (1993). *Human Capital: A theoretical and empirical analysis with special reference to education*. Chicago: the University of Chicago Press. Accessed on 17 August 2014 <http://books.google.nl/books?hl=en&lr=&id=9t69iICmrZ0C&oi=fnd&pg=PR9&dq=A+Theoretical+and+Empirical+Analysis+with+Special+Reference+to+Education>.
- Coronel, A., L. (2015). Uganda's Ambitious Infrastructure Plan Set to Boost Economy. IMF, African Department. July 7, 2015.
- Garcia & Marito. (2008). Directions in Development- Human Development. World Bank.

- International Institute of Tropical Agriculture. (2014). Agricultural Transformation Agenda. Youth in Agribusiness. Background paper, IITA.
- Jeffrey, C. (2008). Generation nowhere: Rethinking youth through the lens of unemployed young men. *Progress in Human Geography* 32(6): 739–758.
- Jeffrey, C. (2009). Fixing futures: Educated Unemployment through a North Indian Lens. *Comparative Studies in Societies and History* 51(1):182-211
- Laker-Ojok, R. (2014). Climate change and agricultural infrastructure in Uganda. Tetra Tech ARD.
- Manser, M., E., Lin, Z. & Marilyn, E. (1998). The role of self-employment in job creation in Canada and the United States. September 1998.
- Ministry of Finance Planning and Economic Development (2014). Uganda's employment challenge. Economic Development and Policy Research Department. November, 2014.
- Naafs, S. (2012). Navigating School to Work Transition in Indonesia Industrial Town: Young Women in Cilegon. *The Asian Pacific Anthropology* 13(1):49-63.
- Naafs, S. and B. White (2012). Intermediate Generations: Reflections on Indonesian Youth Studies. *The Asia Pacific Journal of Anthropology* 13(1): 3-20.
- National Development Plan Uganda 2007
- Ndyanabangi, Bannet; Kipp, W; Diesfeld, H., J. (2004). Reproductive health behavior among In-School and Out-Of-School Youth in Kabarole District, Uganda. *African Journal of Reproductive Health* 8 (3): 55–67. December, 2004. [doi:10.2307/3583393](https://doi.org/10.2307/3583393). [PMID 17348325](https://pubmed.ncbi.nlm.nih.gov/17348325/).

OXFAM. (2013). Growing Disruption: Climate Change, Food and the Fight Against Hunger. Retrieved:<http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=8&ved=0CG0QFjAH&url=climate-change-230913>.

Parthasarathy, D. (n.d). Agriculture, Technology, Livelihoods, and Employment in India: Debates, Issues, and Concerns. Department of Humanities and Social Sciences, Indian Institute of Technology Bombay.

Payne, G., & Payne, J. (2004). *Key Concepts in Social Research*, London: Sage Publications.

Roshan, D., & Deeptee, P., R. (2009). *Justifications for Qualitative Research in Organisations: A Step Forward. The Journal of Online Education*, New York, 06 January.

Roshan, D., & Deeptee, P., R. (2009). *Justifications for Qualitative Research in Organisations: A Step Forward. The Journal of Online Education*, New York, 06 January.

Sanginga, N. (2015). International Institute of Tropical Agriculture. Youth in Agribusiness within an African Agricultural Transformation Agenda. Background Paper.

Schuetze, H. J. (1998). Taxes, Economic Conditions and the Recent Trends in Male Self Employment: A Canada-U.S. Comparison. 1998 Canadian Economics Association meetings, University of Ottawa, Ottawa, Ontario.

[Sekaran](#), U. (2002). *Research Methods for Business: A Skill Building Approach*, 4th Edition. John Wiley & Sons, Inc.

TeVeld, D.W. (2008b). Analyzing the effects of growth policy scenarios in Uganda. Background Note 4. DFID-funded Project on Political Incentives and Growth. London:

World Bank (2008). *African Development Indicators 2008/2009*. Washington, DC: World Bank.

www.economicsonline.co.uk

www.investopedia.com

Youth Employment, the donor committee for enterprise development. Accessed at: <http://www.enterprise-development.org/>.

APPENDIX I

MUKOTANI RUGYENDO

P.O. BOX 31178

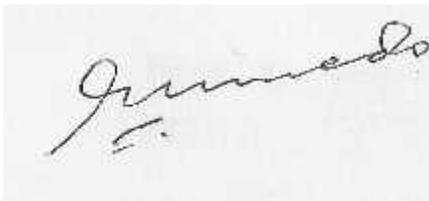
KAMPALA

TEL: 0701707093

25 September 2016

CERTIFICATE OF PROOF THAT DISSERTATION HAS BEEN EDITED

This is to certify that the Master's Degree dissertation entitled, **Agribusiness Incentives and Youth Employment in Northern Uganda: A Case Study of Gulu District by Anthony Kerwegi** , has been reviewed and corrected in order to ensure clarity of expression and consistency regarding key style aspects like general grammar, sentence structure to ensure logical flow and effectiveness of meaning, all-round punctuation, use of tenses and articles, subject-object agreement, citation and referencing.

A handwritten signature in black ink, appearing to read 'Mukyendo', is written on a light-colored background.

Mukotani Rugyendo

Professional Editor

APPENDIX II

QUESTIONNAIRE

Dear Respondent,

I am Anthony Kerwegi, a student at UTAMU. I am carrying out a research study on “Agribusiness Incentives and Youth Employment in Northern Uganda studying the case of Gulu District”. The study is being conducted in fulfillment of the requirement for the award of a degree of Masters in Monitoring and Evaluation. This questionnaire is seeking information on the study. The information provided in this questionnaire will be used for academic purposes only and shall be accorded utmost confidentiality. Therefore, your contribution towards filling in this questionnaire will be a great contribution to my academic endeavor.

Thank you.

Section I (a): Bio Data

1. Your gender/sex

Male	Female

2. Your age bracket

18-24 yrs	24-30 yrs	30 yrs & above

3. How long have you been engaged in Agribusiness.

Below 2 yrs	3 – 4 yrs	5 – 10 yrs	Above 10 yrs

4. Level of education

Degree	Diploma	Certificate	A level	O level	Primary

--	--	--	--	--	--

5. Type of Agribusiness engagement.

Position	Tick	Crops/product	Number (Acres or pieces)
Small holder Farmer (specify crop)			
Produce trader			
Agro processor			
Animal rearing (Specify).....			
Commercial farmer			
Member of a local association			
Student			
Others (Specify).....			

SECTION II: Technology

Please indicate the extent to which you agree or disagree with the statements below.

Key: 1=SD-strongly disagree; 2=D-disagree; 3=NS- not sure; 4=A-agree and 5=SA-strongly agree

Items	SD (1)	D(2)	NS 3)	A (4)	SA (5)
The cost of value addition equipment is affordable					
Accessibility of Agro processing equipment is difficult for farmers					
Young farmers possess the required technical skills in Agribusiness					
Quality and drought resistant variety of seeds are easily accessible					
Farmers can access internet using their phones					
Young farmers have access to modern farming implements like tractors, ploughs etc.					
I process my produce before selling					
Post-harvest losses are not an issue in my harvest					
Young farmers possess required knowledge on how to use ICTs					
I appreciate the relevance of Technology in Agribusiness					

Farmers have benefited from the use of ICTs					
GMOs are important in increasing productivity					
I have access to basic farming implements like hoes, slashers, spades, axes etc.					
Government and private sector provides adequate technical support to youth enterprises.					

SECTION III: Agricultural Infrastructure

Please indicate the extent to which you agree or disagree with the statements below

Key: 1=SD-strongly disagree; 2=D-disagree; 3=NS- not sure; 4=A-agree and 5=SA-strongly agree

Items	SD (1)	D (2)	NS (3)	A (4)	SA (5)
The road infrastructure promotes easy movement of farmer produce					
Farmers access markets easily					
Availability of phones allows easy exchange of information for farmers					
Farmers are able store their produce properly after harvest					
Farmers can easily access markets for their produce					
Farmer production has increased due to the availability of support infrastructure					
There is easy distribution of farmer products to markets					
Lack of storage facilities for farm produce affects farmers					

SECTION III: Institutional Support

Please indicate the extent to which you agree or disagree with the statements below

Key: 1=SD-strongly disagree; 2=D-disagree; 3=NS- not sure; 4=A-agree and 5=SA-strongly agree

Items	SD (1)	D (2)	NS (3)	A(4)	SA(5)
I have the required training on farming methods					
I have all the required agricultural skills					
I can access any necessary skills to enhance my farming					

I benefit from government entrepreneurship support programmes.					
As a result of farmer skills training, I compete better in the labour market.					
Training Institutions are easily accessible					
There is sufficient access to market information.					
Through government programs, farmers' skills are developed.					
I can easily apply learned agricultural and entrepreneurial skills					
I can easily access credit from financial institutions					
The credit terms set by financial institutions are favorable					
Before I acquire loans, am trained on how to manage credit					
I can easily access the markets for my produce					

SECTION IV: Youth Employment

Please indicate the extent to which you agree or disagree with the statements below

Key: 1=SD-strongly disagree; 2=D-disagree; 3=NS- not sure; 4=A-agree and 5=SA-strongly agree

Items	SD (1)	D (2)	NS (3)	A(4)	SA(5)
Employment improves my standards of living					
Employments enhances the productivity					
Am able to find employment relevant to my skills sets					
Agribusiness provides a good opportunity for youth employment					
Agriculture provides employment opportunities for youth					
Agribusiness as has been promoted by on-farm job creation					
When my business is profitable, am encouraged to employ more staff.					
Increased productivity helps me increase income					

INTERVIEW GUIDE

An assessment of Agribusiness Incentives and youth employment in Gulu District.

A. Technology (*Agric input, ICT & processing*)

1. What agribusiness technology incentives exist in Gulu and how far do they support youth employment?
2. What are the challenges with regard to technology in Agribusiness.
3. What are the recommendations/solutions to the above challenges in technology.

B. Institutional (*loans, education and training and market access*)

1. What are the institutional initiatives that support youth employment in agribusiness?
2. What are the challenges of institutional support in agribusiness?
3. What are the suggestion and recommendation for improving institutional support towards agribusiness?

C. Infrastructure (*transport, storage and market places*)

1. What are the infrastructure initiatives that support youth employment in agribusiness?
2. What are the challenges with regard to infrastructure in promoting youth employment in agribusiness?
3. What are your recommendations and suggestions to infrastructural challenges in promoting youth employment in agribusiness?

D. Youth employment (Returns from agribusiness, employment capacity)

1. What are the youth employment prospects from agribusiness?
2. What are exactly the challenges of youth employment/unemployment in agribusiness?
3. What are the solutions to the challenges of youth employment/unemployment in agribusiness

Thank you for Participating.