

**IMPACT OF YOUTH DEVELOPMENT FUND ON THE YOUTH LIVELIHOODS IN  
ZAMBIA: A CASE OF RURAL YOUTH AQUA-CULTURAL ENTREPRENEURS IN  
KASEMPA DISTRICT.**

**BY**

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**A RESEARCH REPORT SUBMITTED AS PARTIAL FULFILLMENT FOR THE  
AWARD OF A MASTER'S OF BUSINESS ADMINISTRATION AT THE  
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**Year:** 2020 **Degree:** Masters of Business Administration

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This research project is my original work and has not been presented for examination or award in any other University.

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This research project has been submitted for examination with my approval as the University Supervisor.

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**Approval**

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## **Dedication**

This research report is dedicated to my Parents, my Wife and Children, Brothers and Sister, and beloved families for their prayers, encouragement, support and patience throughout our academic struggles.

## **Acronyms**

<b>ADA</b>	Aquacultural Development Authority
<b>AEO</b>	Authorized Economic Operator
<b>BDS</b>	Business Development Services
<b>CBOS</b>	Community Based Organizations
<b>CDF</b>	Community Development Fund
<b>CIS</b>	Commonwealth of Independent Status
<b>DFID</b>	Department for International Development
<b>FAO</b>	Food Agricultural Organization
<b>GDP</b>	Gross Domestic Product
<b>ICT</b>	Information and Communications technology
<b>IFAD</b>	International Fund for Agricultural Development
<b>ILO</b>	International Labor Organization
<b>MDG</b>	Millennium Development Goal
<b>NASSIT</b>	National Social Security and Insurance Trust
<b>NAYCOM</b>	National Youth Commission
<b>NCSD</b>	National Council for skill Development
<b>NGO</b>	Non- Governmental Organizations
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>SD-FAO</b>	Sustainable Development – Food and Agriculture Organization
<b>SLF</b>	Sustainable Livelihood Framework
<b>SPSS</b>	Statistical Package for Social Science
<b>UNDP</b>	United Nations Development Programme

<b>UNEP</b>	United Nations Environmental Programme
<b>UNFPA</b>	United Nations fund for Population and Activities
<b>USAID</b>	United States of America Aid for International Development
<b>VSLA</b>	Village Savings and Loan association
<b>WEDF</b>	Women Enterprise Development Fund
<b>YEDF</b>	Youth Enterprise Development Fund
<b>YEPP</b>	Youth Employment and Empowerment Program
<b>YESA</b>	Youth Empowerment in Sustainable Agriculture
<b>YISA</b>	Youth Initiative for Sustainable agriculture

## **Table of Contents**

Thesis Copyright Declaration .....	i
Author’s Declaration .....	ii
Approval .....	iii
Dedication .....	iv
Acronyms .....	v
List of Tables .....	xi
List of figures .....	xii
Operational Definition .....	xiii
Abstract .....	xv
<b>CHAPTER ONE: INTRODUCTORY BACKGROUND .....</b>	<b>1</b>
1.0 Introduction .....	1
1.1 Background of the study .....	1
1.1.1 Youth Empowerment .....	2
1.1.2 Livelihoods .....	4
1.3 Statement of the Problem .....	6
1.4 General Objective .....	7
1.4.1 Specific Objectives .....	7
1.4.2 Research Hypotheses .....	7
1.5 Significance of the Study .....	7
1.6 Scope of the study .....	8
1.7 Limitations of the study .....	8
1.8 Organization of the Study .....	9
<b>CHAPTER TWO: LITERATURE REVIEW .....</b>	<b>11</b>
2.0 Introduction .....	11
2.1 Theoretical Review .....	11
2.1.1 Critical Social Theory of Youth Empowerment .....	11

2.1.2 Maslow’s Hierarchy of Needs Theory.....	13
2.1.3 The Growth Theory .....	15
2.2 Empirical Review .....	16
2.2.1 Financial Literacy Training and livelihood .....	16
2.2.2 Provision of Initial Start-up Capital and Livelihood .....	17
2.2.3 Market linkages and Livelihood.....	18
2.4 Summary of Research Gaps.....	23
2.5 Conceptual Framework .....	25
<b>CHAPTER THREE: RESEARCH METHODOLOGY .....</b>	<b>26</b>
3.0 Introduction.....	26
3.1 Research Design.....	26
3.2 Study Population and Sample size .....	26
3.3 Sampling method .....	27
3.4 Instruments of Data Collection .....	27
3.5 Data Analysis Techniques .....	27
3.6 Validity and Reliability of the Research Instrument.....	28
3.6.1 Validity .....	28
3.6.2 Reliability of Instruments .....	28
3.7 Ethical Considerations.....	29
<b>CHAPTER FOUR: RESEARCH FINDINGS, DISCUSSION &amp; INTERPRETATIONS</b> .....	<b>30</b>
4.1 Introduction.....	30
4.2 Response Rate .....	30
4.3 Reliability Test .....	30
4.4 Demographics Characteristics .....	31
4.4.1 Gender Distribution.....	31
4.4.2 Composition of Respondents by Age .....	32
4.4.3 Marital Status .....	33

4.4.4 Level of Education .....	33
4.4.5 Fish Produced.....	34
4.4.6 Fish production.....	35
4.4.7 Education and Financial Literacy Training .....	35
4.5 Descriptive Statistics for the Research Variables .....	37
4.5.1 Financial Literacy Training and livelihood .....	37
4.5.2 Provision of start-up capital and livelihood .....	40
4.5.3 Market Linkage and livelihood .....	43
4.5.4 Aquaculture empowerment and livelihood.....	46
4.6 Inferential statistics .....	49
4.6.1 Tests of regression assumptions.....	49
4.6.1.1 Normality test.....	49
4.6.1.2 Homogeneity of Variance .....	51
4.6.1.3 Test for outliers .....	53
4.7 Test of hypotheses.....	58
4.7.1 Co-efficient of Determination.....	58
4.7.2 Analysis of Variance (ANOVA).....	59
4.7.3 Multiple regression analysis .....	60
<b>CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS .....</b>	<b>63</b>
5.1 Introduction.....	63
5.2 Summary of Findings .....	63
5.2.1 Financial Literacy Training and livelihoods .....	63
5.2.2 Provision of start-up capital and livelihoods .....	63
5.3 Conclusions.....	64
5.4 Recommendations of the Study .....	65
5.5 Suggestions for Further Study .....	66
REFERENCES .....	68

APPENDICES .....	72
Appendix I: Letter of Transmittal.....	72
Appendix II: Questionnaire .....	73
Appendix III: Map of Kasempa .....	81

## List of Tables

Table 1 Summary of Literature and Research Gaps .....	23
Table 2 Response Rate .....	30
Table 3 Reliability Tests.....	30
Table 4 Fish produced.....	34
Table 5 Fish Production .....	35
Table 6 Education and financial Literacy training.....	36
Table 7 Financial Literacy Trainings .....	37
Table 8 Financial records challenges .....	39
Table 9 Interaction with Farm Africa.....	40
Table 10 Formation of Aquaculture Enterprises.....	40
Table 11 Provision of start-up capital .....	41
Table 12 Income Generated.....	42
Table 13 Engagement of market supplied .....	43
Table 14. Engagement in contract farming .....	44
Table 15 Market where produce is sold on contract .....	44
Table 16 Gender participation in marketing.....	45
Table 17 Savings and credit.....	46
Table 18 Self-employment .....	47
Table 19 Creation of Employment.....	48
Table 20 Normality tests .....	49
Table 21 logarithmic transformation for Normality test .....	50
Table 22 Friedman’s test .....	50
Table 23 Homogeneity of variance.....	51
Table 24 Model Summary .....	58
Table 25 Summary of One-Way ANOVA.....	59
Table 26 Multiple regression analysis.....	60

## List of figures

Figure 1 Conceptual Framework .....	25
Figure 2 Gender Distribution.....	31
Figure 3 Composition of respondents by Age .....	32
Figure 4 Marital status.....	33
Figure 5 Level of Education .....	33
Figure 6 Outliers showing financial literacy .....	53
Figure 7 Outliers for provision of start-up capital .....	54
Figure 8 Outlier for Market linkages .....	55
Figure 9 Outliers for savings and credit .....	56
Figure 10 Outlier for create employment. ....	57

## **Operational Definition**

**Empowerment:** Empowerment is a liberation program which the under privileged are empowered to practice their rights by obtaining access to resources and get involved actively in the process of shaping the society either economically, socially or politically thus enhancing their decision-making capabilities.

**Employment:** Employment is a contract involving an employee and an employer that the employee will give particular services on the job, and in the employer's designated workplace, to make possible the achievement of the employer organization's mission and goals, for an agreed remuneration. The contract can be an official employment contract implied, or verbal.

**Innovation:** The procedure of interpreting an invention or idea into a service or good that generates value or for which customers will pay

**Livelihoods:** Livelihood is a way of making a living. It comprises of the activities, assets, and capabilities required to earn an income to sustain and cope with the necessities of life i.e. provision of the basic needs of an individual that include food, shelter, clothing and education that help recover from stress and shocks of life.

**Poverty:** Situation where people's basic needs for clothing, shelter, and food are not being met

**Perception:** The process of being aware of something, an insight or knowledge gained by thinking and translating it to either attractive or unattractive without realizing the importance of the situation or object

**Self- Employment:** Self-employment is referred to as the process of earning some money straight from customers through clients, other organizations or working as opposed to being an employee of a business (or person).

**Sustainability:** Sustainability is the capacity or ability of something to be sustained or to maintain itself. It's about taking what we need to live now, without corrupting the capability for persons in the days to come in meeting their requirements.

**Youth:** This is a period of evolution from the reliance of childhood to adulthood's freedom, specifically in relation to employment and education, because 'youth' is frequently signified as individuals between the ages of departing from compulsory education, and finding their first job.

**Youth Empowerment:** Youth empowerment is a cultural, attitudinal, and structural process whereby young people acquire the authority, agency, and ability to make choices and employing social, economic or political change by engaging this in their own lives and the lives of other people, including youth and adults.

## **Abstract**

In Zambia, 35% of the Zambian population is youth of ages between 15 to 34 years old. They are recognized as Zambia's most critical untapped resource with the highest unemployment rate of 67%. Due to the increasing population of unemployed youths in Zambia, the Government of Zambia has been running various youth initiatives programs to provide training aimed at providing relevant work experience and skills to enhance sustainable livelihoods and self-employment. Zambia's agriculture sector is on the other hand the second largest foreign exchange earner even though the aquaculture sector takes a small percent for providing informal self-employment and income generating opportunities. The purpose of the study was to establish the extent to which youth empowerment activities will have on their livelihoods. The study was guided by the following specific objectives: To determine the influence of financial literacy trainings, provision of start-up capital influence, market linkages and aquaculture empowerment on livelihood of the youth in Kasempa District. The study was be guided by Critical social theory of youth empowerment, Maslow's hierarchy of needs theory and theory of growth. The study employed descriptive research design where a target population of 110 youths from Kasempa who in this case made up the total sample size for the study. These groups participated in the youth empowerment in sustainable agriculture (YES) project. Quota sampling was used to draw the participants that participated in the study while the Primary data was collected using structured questionnaire. Reliability of the data collection instruments was done using Cronbach's alpha. Validity was done through pre-test to check inadequacies on the tools before actual data collection. Descriptive statistics were used to analyze the data by giving the standard deviations, mean, percentages and inferential statistics in the form of correlation tests and regression analysis. Results were presented using tables, pie charts and bar graphs.

Based on the results of the study, it was established that financial literacy trainings had significant and positive effect on the livelihoods of the youth as the youth realized that they had a challenge in keeping records and that their level of education contributed to the slow uptake of understanding the record keeping concepts. The study also revealed that there was a significant and positive effect on the provision of start-up capital to the livelihoods of the youth which enabled them to start their aquaculture enterprises, enabled them to borrow loans and earn incomes. The linkage to markets also revealed a significant and positive effect on the youths' livelihoods as it showed that market accessibility and information was important

as it allowed availability of ready market for their aquaculture products boosted their income generation. Aquaculture empowerment of the youth also displayed a significant and positive effect on their livelihoods as it provided an opportunity for the youth to participate in savings and credit activities that allowed them to accumulate money to invest in the aquaculture enterprises. It also allowed them to appreciate that aquaculture provides an avenue for self-employment as it gave most of the youth opportunity to manage and make decisions on the operations of their own horticulture enterprises. It was recommended that youth empowerment programs. Promotion of aquaculture production as an employment opportunity for the youth should be emphasized with the aim of increasing quality and quantity of harvest and income to achieve lasting impacts.

## **CHAPTER ONE: INTRODUCTORY BACKGROUND**

### **1.0 Introduction**

Chapter one presents the study background, problem statement, study objectives and research questions, provided the rationale of the study, the study scope, the literature review, and theoretical framework

### **1.1 Background of the study**

Zambia had high rates of youth unemployment. In 2014 approximately 10.5% of young people aged 18-35 were unemployed compared to 7.4% of general unemployment rate (Central Statistical Office, 2015). The challenge of high youth unemployment was of great concern especially that Zambia was a youthful country whereby 80% of the population falls below the age of 35 (Central Statistical Office, 2012).

The problem of youth unemployment has been exacerbated by the fact that economic growth in the past 14 years has not been very inclusive. While this affects everyone, the situation has been worse for the youth as most of them leave the school system with high expectations of finding employment.

It was estimated that each year, approximately 300,000 young people left the school system to join the labour force (Ministry of Finance and National Planning, 2013). Only a paltry of these school-leavers, however, had been absorbed into the labour market as job opportunities had not grown commensurate to the growth of the labour force. It was estimated that between 2005 and 2014 formal jobs increased at the rate of 56 000 per year.

Although the large young population in Zambia presented huge challenges to socio-economic development, it also offered a unique opportunity that needs to be harnessed for accelerated economic growth. According to the report on harnessing Zambia's demographic dividend (Ministry of Finance, 2015), the current age structure of the population would shift from being one dominated by child dependency to one in which there were more people in the working-ages relative to dependents especially if fertility declines rapidly.

If this change was accompanied by strategic and simultaneous investments in human capital development, economic reforms and job creation, and good governance as envisaged in Vision 2030, Zambia could experience a sustained period of rapid economic growth. This

could earn the country a substantial demographic dividend. The key to success, however, was to ensure that all aspects move together and reinforce each other in an integrated approach to development. Youth empowerment was one such important ingredient. The slow growth of formal employment coupled by high population growth rate over the past two decades had led to a situation where a large population of young people had limited employment opportunities in the formal sector.

In view of limited paid employment opportunities to mitigate youth unemployment, youths can get involved in other income earning activities such as entrepreneurship, supported by mentorship. To do this, however, the youth require financial resources as well as business development services to enable them run successful businesses. On the other hand, access to finance in Zambia was limited for various reasons which include high interest rates, collateral and various stringent business requirements demanded by lending institutions that youth rarely meet.

This had led to most youths failing to access finance resulting in increased and persistent levels of youth unemployment and poverty.

### **1.1.1 Youth Empowerment**

Youth empowerment was understood as a situation where young people acquire the skill, authority, and agency to make decisions and implement change in their own lives and the lives of other people, including youth and adults through an attitudinal, structural, and cultural process (Vavrus and Fletcher, 2006). Youth empowerment aimed at improving the quality of life and was achieved through participation in youth empowerment programs which included opportunities like; developed internships and attachments, advisory programs, financial, legal, marketing and other assistance, and creating an equal engaging field in terms of jobs, markets and capital access (Ledford, 2013). The three different categories of youth empowerment were individual, organizational and community empowerment (Ibid, 2013). Individual empowerment related to young people or adults with emerging skills to practice control and improve their know-how.

Organizational empowerment relied on the opportunity for young people or adults to acquire the skills needed to gain control over their lives and also involved the organizations that provided and benefited from the youth by providing alternatives to service provision, as well as organizations that developed and influenced policy resolutions. Community empowerment

on the other hand included an attempt to better the community, react to risks to quality of life, and allows for people's contribution at a local, state, and national level. An example was the Agricultural youth empowerment, which had brought about the youth initiative for sustainable agriculture (YISA) a project located in Nigeria which was focused on young graduates of agricultural discipline and other youths interested in agriculture to gain from this Agro-knowledge based organization that aimed to empower the Nigerian youth to promote agriculture (Ogunremi et al, 2012).

In Kenya for example, there were various projects on Youth Empowerment which were geared to better the lives of youths living and working in Kenyan rural settings. To ensure provision of skills training and capacity building to young people in rural settlements was the overarching aim of youth empowerment in rural settlements. The programs were being executed in Kenya to generate employment prospects for continued development of young people. The main goal was to enhance the livelihoods of both men and women, living and working in rural settlements, by providing interactive training skills in agri-business development in Aquaculture production that led to skills, financial literacy and farm management skills experience to compete for production and marketing space in the aquacultural industry (OECD, 2012). In view of the Youth empowerment in sustainable Agriculture (YESA) project, it strengthened and assisted the youth groups to start and manage agricultural businesses. Training and technical assistance in agronomy and marketing were delivered by the project. These assisted the groups to access markets for their products, and encouraged the young members to participate actively in local leadership and governance. In addition, the YESA project developed linkages with private sector companies that provide market opportunities, which ensured that the youth groups continued to generate income. The project aimed to have at least 60% commercially viable enterprises with clear linkages to profitable markets.

To ensure sustainability, the project helped the youth groups to register CBO's (Community based organizations) or commercial enterprises and trained them on business management as private or social enterprises (Farm Africa YES project report, 2015). These included Supporting the youth with both technical and financial training, facilitating them with seed capital to start up the Agri-enterprises, facilitating market linkage and contractual farming agreements, savings and linking the farmers to credit institutions and create employment. This project focused on empowerment of the youth with financial literacy trainings, start-up

capital, market linkages and aquacultural production training. These four empowerment areas were chosen by the project as they were seen to directly impact knowledge and skills that can be sustainably used by the youth to improve their livelihoods. Financial literacy, start-up capital, market linkage and Aquaculture empowerment were community-based empowerment activities which entailed sensitization and mobilization of youth to form organized groups within the villages. The organized youth groups were then taken through different aspects of trainings on financial literacy so as to provide knowledge which would enable them to do farming as a business. The start-up capital was provided in groups to assist them in initiating the business that will eventually contribute to individual youth business set up.

Furthermore, to ensure that the business enterprises worked appropriately, the project looked at the market linkages that were done at the group level. This was because markets required large volumes of produce which required the farmers to market the produce together. To ensure quality production of the produce, the youth were taken through trainings on aquacultural production. These were mainly on-farm trainings that involved practical work using the set-up demonstration plots. The Aquaculture production provided trainings on good agricultural practices that informed the farmers on the proper fish management skills to increase their production and eventually increase in incomes that would sustain their livelihood requirements.

### **1.1.2 Livelihoods**

Livelihood was described as a process of earning a living. It involved people's capabilities, assets, income and activities required to secure the necessities of life. The sustainability of livelihood was experienced when people were able to deal with and regain from devastations and traumas, coupled with enhancing their welfare and that of coming compeers without destroying the natural environment or resource base, (Robert and Gordon, 1992). The Sustainable Livelihoods Framework (SLF) was developed by the UK Department for International Development (DFID) with the purpose of building on the work of practitioners and academics so as to better understand how people developed and maintained livelihoods. Therefore, the many factors that affected a person's livelihood and how those factors interacted with each other were analyzed by using this framework as a tool, making it more useful for understanding livelihoods. The observations made by SLF on livelihoods was of systems that provided an avenue to appreciate what resources people pulled from, the plans they created to earn a living, the background in which a livelihood was created and those

factors that enabled a livelihood more or less exposed to shocks and stresses (DFID report, 2014).

In addition to the above, measurement of livelihoods was based on six components which were; Food security, Nutrition Security, Economic Security, Shelter/water and sanitation security, Health Security and Education security (TANGO International Inc, 2004). Food Security was explained in relation to food accessibility, handiness, and consumption (Riley et al., 1999). The perspective of a household livelihood looked at food security as a function of whether food was readily available either on-farm or in the market place, whether families had access to the food, and whether patterns of food consumption, plus intra-household distribution, were such that the nutritional needs of all family members were taken care of. In principle, the quantity and quality of food available to families throughout the year and the distribution food among all family members was assessed at the impact level using the livelihood analysis of food security.

Also, the food utilization component was a livelihood outcome that was closely related to food security which was used to measure nutritional Security. The child and maternal nutritional status were the conventional components of nutritional security. Economic Security was comprised with a steady income or other resources to aid a standard of the current living status and in the probable future (TANGO International Inc, 2004). Economic Security had also been defined by the ICRC as the capability of persons, families or communities to meet their essential needs (Food, basic shelter, clothing and hygiene qualify) sustainably and with dignity (ICRC Economic Security, 2013). Shelter/Water and Sanitation security had been combined using group approaches by global health community to guarantee fundamental services like accessing secure drinking water, access to essential sanitation services and hygiene, training and education. Health Security had several components considered to be critical. The already witnessed low levels of incomes and production in a family were attributed to the frequency of illness episodes which had a harsh effect on the productiveness of family members, thus upsetting the nutritional and food security (Ibid, 2004). There was a direct relationship between the accessibility of primary health care by households in the country side and their level of reach to the required medical care. Education security consisted of the general education levels of the families, educational differences amongst gender, and the general literacy levels amongst the adults in the families (Op cit, 2004).

### **1.3 Statement of the Problem**

In Kasempa, the youth faced a series of challenges which include lack of employment opportunities; every year a total number of 500,000 youth graduate from diverse tertiary institutions, but due to slow economic growth, corruption, nepotism and demand for experience, 75% of these youth remain unemployed. The other greatest challenge was based on youth empowerment and participation which encompasses the involvement of youth in transformative activities. In Kasempa, the youth were side lined in participating in public forums as they are seen as idle, immature, disrespectful and not concerned about the community's well-being. These young people needed to be branded in platforms where they could speak and express themselves and inspire belief that could catalyze impact through youth led development initiatives, (Liebrandt and Mlatsheni, 2004). Lack of exposure to education and training on the other hand had resulted in denying the young people access to quality education due to high costs, poverty and lack of appropriate facilities resulting to high school drop outs, (World Bank, 2004c).

It was further learnt that; the young people also lacked the necessary skill set for self-employment due to either none completion of university or college or completion of university or college courses where they did not have adequate training and exposure. Also, the country's training institutions either lacked the appropriate facilities and technologies to prepare students adequately, creating a challenge to meet the market demand for professionals. Young peoples' access to finance was also identified as a huddle due to their passive inability to comply with the high transaction costs, lack of collateral, appropriated financial documentation and difficulty in managing and assessing the youth's profile thus a prerequisite for the lending institutions to avoid the youth. Other challenges the young people face were involvement with crime - which was mostly financially motivated, inaccessibility to proper health care, access to information and communication technology, involvement in environmental activities and depressed leisure, recreation and community services that can be used to nature the young peoples' talents.

It was in light of this that, youth becoming progressive in numerous parts of Zambia had become difficult. Therefore, to ensure these young people were able to lead healthy and productive life, innovative and sustainable approaches needed to be invented so as to contribute to socioeconomic development in their communities. Therefore, this study depicted the reason for carrying out this study as it focused on youth empowered by both

resources in terms of access to capital in kind and trainings in technical and business skills to improve their aquacultural enterprises and have healthy relations with markets for growth of their enterprises. This was founded on the understanding that; the empowerment activities were geared to assisting the young farmers to create self-employment opportunities and increase incomes to improve their wellbeing.

#### **1.4 General Objective**

To ascertain the impact of youth development fund on the youth livelihoods in Zambia: A case of rural youth aqua-cultural entrepreneurs in Kasempa district.

##### **1.4.1 Specific Objectives**

The specific objectives of the study were:

- To determine how financial literacy trainings, influence livelihoods of youth in Kasempa.
- To evaluate how the provision of start-up capital influence the livelihood of youth in Kasempa.
- To examine how market linkages influences livelihoods of youth in Kasempa.
- To show the influence of Aquaculture empowerment on livelihoods of youth in Kasempa.

##### **1.4.2 Research Hypotheses**

HO1: There is no significant relationship between financial literacy training and Livelihoods.

HO2: There is no significant relationship between startup capital and livelihoods

HO3: There is no significant relationship between market linkages and livelihoods

HO4: There is no significant relationship between Aquaculture empowerment and Livelihoods.

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

The outcomes and commendations of this paper were to contribute to widening the experience of the rural youth. The Policy makers in many developing and emerging economies acknowledge would also be guided by the unrelenting nature resulting from the “youth bulge” challenge and to identify ways to effectively incorporate the rural youth into

the labor markets and societies of their countries. Furthermore, the findings of this project were essentially useful to the Ministry responsible for Youth, as well as that responsible for Development at the National level that in essence would help them come up with strategies useful in addressing youth unemployment in Zambia. Besides, this study provided data and information that would be used by the local Government of Kasempa in coming up with a marshal plan and strategic plan on youth employment and job creation strategies for sustainable development. In addition, the government, non-governmental organizations and the donor community as well as business development service providers would use this study to provide direction on how best to involved the rural youth in viable agricultural activities that can provide consistent income generation and secure their livelihoods. This paper would also be beneficial in interjecting to the available information/literature that may be used by educational intellectuals who may desire to conduct further research on a similar/ interlinked subject matter. The opportunities identified in this study would be used to appraise policies, direct stakeholders who participate in formulating and designing programs and projects directed to the youth in Aquaculture sector and provide learning platforms that will interest the youth to invest their funds and time into Aquaculture.

### **1.6 Scope of the study**

The study was conducted in Kasempa district. This district was selected because it is located close to the body the Zambezi River and there are enormous opportunities in irrigated agriculture and a lot of untapped youth involvement in smallholder aquaculture production targeting export and local markets. In light of this, the study focused on ascertaining the impact of youth development fund on the youth livelihoods: a case of rural youth aquacultural entrepreneurs in Kasempa district. To establish this, it dwelled on determining how financial literacy trainings influenced livelihoods of youth in Kasempa; evaluated how the provision of start-up capital influence the livelihood of youth; examined how market linkages influences livelihoods of youth; and showed the influence of Aquaculture empowerment on livelihoods of youth in Kasempa. As such, the study location was chosen because it on the other hand had an already available population of respondents.

### **1.7 Limitations of the study**

Comprehensive coverage of the research was restricted by the geographical expanse of the district. This was mitigated through proper identification of the specific areas to which the

youth aquaculture projects were most active and focused on those farmers within those areas. The constraints of time and resources also limited the rolling out of the project and were specific to the data collection exercise. This was mitigated by the creation of a clear program that provided number of days to collect the data in the specific areas and the cost implication. This plan provided a clear indication of the time to be consumed by the data collection and the actual number of people required to do the work. Targets for each enumerator were also set so as to ensure proper utilization of resources per day of data collection.

There was limited documented information on the subject for the area. This was because there was no other similar project carried out within the region. Therefore, getting facts and figures were highly dependent on the Farm Africa staff. Also, the willingness of participants to give information was a unique limitation since they did not trust my involvement in the aquaculture. This called for prior introductions to respondents and an explanation of the importance of the findings to them, thus it was prudent for them to cooperate. Furthermore, the literacy level of the participants was a glaring limitation since not all had received formal education. This was mainly mitigated by deliberately having an enumerator from within the community who could translate the questions to mother tongue. Another way used was to engage a group leader who did the translation for the enumerators and a token was provided for them after the days' work. The youth are normally very dynamic as they are in a stage of self-discovery, hence resulting in migration from their original area of settlement either due to pursuit of further education, marriages or look for alternative income generating activities i.e. formal employments. This affected their availability to provide adequate information during data collection.

## **1.8 Organization of the Study**

This research project was structured into five chapters;

- The first chapter included an introduction which constituted background of the study highlighting information on youth empowerment, Aquaculture production, and rural youth in Kasempa. It also gave information on the statement of the study, objectives, and research questions, significance of the study, scope of the study and the limitations of the study.
- The literature review in the second chapter provided the theories that supported the study on youth empowerment in the theoretical review. It also provided the empirical review where studies done on youth empowerment project in different areas were

highlighted. A conceptual framework was outlined showing the independent, dependent and moderating variables.

- The third chapter covered the research methodology used in the study. This chapter provided an introduction on the research methodologies followed by the detailed approach on research design that was used, target population, sample size and sampling techniques, data sources and collection, validity and reliability of the data collected, data collection procedures and data analysis.
- Chapter four provided a highlight on the response rate analysis and descriptive analysis of the research variables and addresses the inferential statistics used. This chapter also provided information on data interpretation and discussions of the analysis conferring to the objectives of the research.
- And finally, a summary of the main findings of the study were highlighted in chapter five. This chapter also included conclusions, recommendations and summary of further studies made in relation to policy and further studies.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.0 Introduction**

This section contained a comprehensive literature evaluation of previous studies and arguments associated with Youth empowerment and livelihood improvements through aquacultural enterprises training around the globe. The chapter concludes with a theoretical and conceptual framework which was an illustrative depiction of the association between the independent variables and the dependent variable and then a summary of the chapter

### **2.1 Theoretical Review**

This study was be guided by four theoretical models; Critical Social Theory of Youth Empowerment (CYE), theory of empowerment, Maslow's Hierarchy of Needs Theory and the theory of growth.

#### **2.1.1 Critical Social Theory of Youth Empowerment**

The genesis of the Critical social theory of youth empowerment emanated from the youth empowerment models had been developed on the empowerment theory which was developed by a social scientist Julian Rappaport (1981) who anchored his developments of the empowerment theory on the Marxist sociological theory. He first began the formation of Empowerment Theory in his paper Terms of Empowerment/ Exemplars of Prevention: Toward a Theory for Community Psychology. In his paper, Rappaport argued that empowerment theory was rooted in the notion that people gained power from having a sense of their personal influence within the structure of social and political power. The theory of Critical social theory was constituted as an effort to reform and rethink the Marxist social criticism; it majorly rejected the mainstream political and intellectual views, criticized capitalism, promoted human liberation, and consequently attempted to expose domination and oppression in their many forms (Harney, 2012). Thus, this contributed to the development of the critical social theory of youth empowerment which began with a theoretical synopsis of examination and empowerment of conceptual models of youth empowerment these were built on six important scopes of Critical Youth Empowerment (CYE) which was designed to integrate chances for the youth to be empowered (Jennings, 2006).

The main features of the critical social of youth empowerment theory are elaborated as follows:

The youth felt valued, respected, encouraged, and supported when the social environment is welcoming and provides them with a safe environment (Jennings, 2006).

The environment on the other hand, provided a comfort zone that brought an opportunity for the youth to disclose their state of belonging, able to take risks and their feelings (Heath, 1991). It was where youth are able to be themselves, try out new roles and skills, found a sense of ownership, articulated their own ingenuity, articulate their opinions in decision-making processes, rise to challenges and were then guided by the adults who assist them to experience both failure and success by supporting them to move away from their normal comfort zone.

Additionally, meaningful participation and engagement were essential in providing the youth with opportunities to participate in useful activities that would enable them generate meaningful impact and also given an opportunity for youth to practice and learn essential participatory and leadership skills (e.g. oral and written communication, organizing, planning) (Ibid, 2006). Adults and Youth had reasonable power sharing between them; the framework of the CYE had a number of models that had addressed chances leadership roles for the youth to participate in Chinman and Linney (1998), which had supported the development of valuable leadership skills amongst the youth. The youth should be supported by an adult leader with no dominance so as to attain combined power between adults and youth, which was important for youth empowerment (ParraMedina, 2008).

Community-Level and Integrated Individual Empowerment; Opportunities needed to be provided by the Youth empowerment agendas for the growth at both community and individual levels where these two stages Individual level empowerment should had a positive impact on the community level. The author also mentioned Zimmerman's Psychological Empowerment theory and emphasized that the inclusion of resource accessibility, use of open governance structures and tolerance for diversity assisted in the community level empowerment process (Hilfinger-Messias, 2008). Furthermore, Socio-Political and Interpersonal Processes Engagement in Critical Reflection; Most of youth empowerment models do not include critical reflection as one of the important dimensions.

The CYE conferred that empowerment would not be possible where lack of awareness to the invisible and visible processes and structures in social institutions were not taken care of fully. Reflection was least recognized in youth programs as more emphasis was more on activities. Involvement in Socio-political Processes in order to effect change; some of the activities in the community for youth engagement were in social change and sociopolitical processes (Jennings, 2006). Therefore, without the capability of the youth to address the social values, structures, processes and practices of the issues at hand, then they were not justly empowered. Zimmerman (1995) argued that gaining mastery within a given social environment was considered to be empowerment. These skills involved the consideration of the fundamental practices and processes of that environment and the best way had an effect on them. Hence, this theory supported this study as it depicted the need to provide economic opportunities to the youth through empowerment on skills that could influence their decision making in society and take part in social change efforts.

### **2.1.2 Maslow's Hierarchy of Needs Theory**

Maslow's hierarchy of needs was influenced by the Need theory which was also called the Three Needs Theory which was first proposed by McClelland in the 1960's as a motivational model that attempted to explain how the needs for power, affiliation and achievement affected the actions of people. The Maslow's hierarchy of needs was proposed by Abraham Maslow in his paper A Theory of Human motivation, 1943 building onto the Need theory. Maslow addressed the issue of motivation in his famous Maslow's Hierarchy of Needs Theory which states that each need must be satisfied in turn, by having the need that dealt with the most obvious needs for survival itself come first. Importantly, the satisfaction of the lower order needs of emotional and physical well-being should be fulfilled; hence the concern of personal and influence development which were of the higher order needs follow. On the other hand, there would be no concern about maintaining the higher order needs if the essentials that fulfill our lower order needs were removed (Maslow, 1970).

The main feature of Maslow's hierarchy of needs was motivation which was an internal state that served to activate and give direction to our thoughts. According to the African Union Commission's, the empowerment of the young people could only be realized if there was an acknowledgement that they had or could make knowledgeable decisions freely, take action based on those decisions, form opportunities in life, were cognizant of the consequences of those selections, and agreed to take responsibility for the outcomes of their actions (AU,

2010). Motivation was considered as a key ingredient for success. An economically empowered person gained more confidence, had elevated self-esteem and earned respect from his peers and the society in general. The different measures of success were termed as the achievement motivation, (Elliot and Church, 1997). Our motives are organized in form of a hierarchy where the most basic needs are at the bottom and must be met first, and onto other needs.

When considering youth empowerment, it was only after the youth had fulfilled their basic needs of food and shelter that they could move to the other higher needs including social interactions and active participation in the community. Therefore, social empowerment meant that one must achieve a certain level of success so as to earn them respect from others, and raises self-esteem. A socially empowered youth tended to be more active in community development activities and also participated in policy planning and implementation at community levels (Curtis, 2008). However, it was important to note that financial support still remained the anchor for real empowerment for the youth, because this would warrant their participation in policies or issues that they feel were directly profiting them. When they felt included, they were more likely to participate (Carver and Baird, 1998).

The willingness of the youth to take the first step and take advantage of the finances available to them through the Youth Fund was the only way to for youth empowerment take off. Accessing capital for starting up businesses was a difficult task for the youth, and few of them could not get loans from established commercial and financial institutions due to lack of collateral. A business could grow even from meager capital as long as it was turning in regular revenue. When the loans were disbursed on time and in the amounts requested, then the youths could grow their businesses and empower themselves. There was positive synergy in groups and exchange of ideas, leading to better outcomes (Sorkin et al., 2001). Therefore, with a business enterprise that was successful, the youth could move from basic needs to fulfilling higher needs. This theory of motivation may partly explain why the youth who had not met their lower level needs were poor participants in social and community affairs.

This theory supported this study as it evaluated a case study where the Youth Empowerment in sustainable Agriculture project was promoting Aquaculture enterprises by encouraging participation of the youth in both technical and financial literacy trainings for improved fish production skills and better utilization of incomes, providing start-up capital to motivate the youth engaged in agri-businesses and linking them with markets for sustainability in income

generation. These supports were hoped to improve their livelihoods by accessing the basic needs like provision of foods, better shelter, and access to education and health care.

### **2.1.3 The Growth Theory**

The growth theory was developed by Paul Romer in 1980's. The theory embraced the fact that economic growth was not external forces but predominantly as a result of endogenous forces. The main engine supporting endogenous development was the exclusion of the conjecture of reducing returns to investment hence endogenous development theory which states that investment in human wealth/ capital, knowledge, and innovation were important contributors to economic growth. The focus of the theory was also on external positivity and a knowledge-based economy which was a as a result of spillover effects leading to economic development. The policy measures were highly depended upon by the long run growth rate of an economy as described by the endogenous growth theory, (Economics course book, 2012).

The main features of this theory as identified by Romer (1990) are the significance of research such that the more people conduct research the quicker they can grow and invent. The implication of an endogenous growth theory was that strategies which encompass change, competition, innovation, and openness would stimulate growth. On the other hand, strategies which had the outcome of limiting or slackening change by favoring or protecting specific existing industries or firms were prone to slow growth to the disadvantage of the community over time. Valuable use of resources and proper management by people stimulates Economic growth. Romer had argued that underdeveloped nations could be set on a different and better trajectory for growth when there were improved institutions and rules (Endogenous technological change, Paul Romer, 1980).

This study examined the economic gain of the youth after they have been empowered with capital and skilled trainings to run Aquaculture enterprises within their localities. The Aquaculture enterprises in which the youth were engaged in required intensive labor and acquisition of land either through renting or donation from the community members. Therefore, this provided an avenue for the supported groups to engage the larger community in providing services that attracted wages, hence bringing about economic growth through an overflow of benefits to both the empowered youth and the community.

## **2.2 Empirical Review**

### **2.2.1 Financial Literacy Training and livelihood**

A study was done by Plan international revealed that financial literacy training provided young people with the capability to finance their futures and be aware of the difference between needs and wants. The ultimate goal for empowering the youth's on financial literacy was to disrupt the progression of economic poverty by empowering the youth with practical skills that could help them understand entrepreneurship, at the same time giving them a sense of hope and interest in participating in self-employment as effective career options (Plan International Report, 2012). The report revealed that groups which had adopted the financial literacy trainings involving monetary savings influenced the fight against youth unemployment, by supporting young people to participate more effectively in market opportunities and also through lessening these challenges to entrepreneurship. The Study concluded that Youth entrepreneurship and savings were approaches that share common methodologies and goals thus, incorporating financial education and activities help youth make good financial decisions (Plan International Report, 2012).

Entrepreneurship training had been assisted by the World Bank in a number of countries. As Premand (2012) impact evaluations imply that there were insufficient outcomes in Tunisia but positive impacts for young entrepreneurs in rural areas in Uganda and Colombia. The Tunisia "Turning Thesis into Enterprise" program offered business training and tutoring to undergraduate students who graduate with a business plan and submit their plan to a competition. Participants reported a 3-percentage point increase in their probability to be self-employed from a low baseline of 4 per cent. However, the training did not affect students' probability of finding a job or increasing their earnings. The Entrepreneurship Development Program (EDP) in Nigeria was designed for the Nigerian youths as a vital mechanism to youth unemployment and aimed to help them consider realistic options of self-employment or starting a small business.

A monitor survey showed an escalating involvement in Entrepreneurship activities in South Africa which was being viewed as a legitimate career option and individuals were being given confidence to take responsibility for their individual success. South Africa's focus on Skills Development Strategy strives to provide training needs of both the informal and formal sectors. However, as Bennell (1993) noted, fundamental disagreements between the

government and employers meant that the government move forward with its own proposals that would borrow heavily from active labor market policies adopted in Australia, Sweden and other developed industrial countries. Such heavy reliance on training policies had brought concerns about the development in very different economic and social contexts.

In Kenya, the Monitor survey (2012) results showed that the local entrepreneurial environment had a positive perception: Important strengths comprises of adequate skills for entrepreneurial ventures produced by a reliable education system, a strong culture of entrepreneurship and restricted administrative burdens. However as much as business persons believed that they get substantial value from business support services, survey responses show that the fees charged were too expensive for start-ups. In Kenya, the main mechanism for improving skill levels for Jua Kali was done by the provision of training vouchers enterprises in the Micro and Small Enterprise and Technology Project through the implementation of provision of training vouchers to 60,000 entrepreneurs and workers who had already established Jua kali (hot sun) manufacturing enterprises. The voucher system in Kenya was envisioned to promote private sector training provision while building on traditional forms of apprenticeship and other forms of enterprise-based training in the informal sector and encouraging cost recovery even amongst the poorest. This study therefore endeavors to establish the extent to which financial literacy skills imparted to the rural youth influence their livelihoods.

### **2.2.2 Provision of Initial Start-up Capital and Livelihood**

The UK department for education and skills (2013) published a paper on non-statutory guidance on youth opportunity and capital fund which revealed that grants provided in Knowsley in 2004 linked more than 560 young people in the neighborhood who had chosen to be in the local network. The grants had benefited more than 330 young people had benefited directly enabling the young people in North Huyton neighborhoods support a range of activities and projects on educational residential for school pupils; workshops on life skills, and other co-curricular activities. This study did not show the economic benefits of the capital fund provided, rather provision of skills and social interaction of young people in the community.

A study done on investigated factors affecting success of projects funded by youth enterprises development projects in Kenya using a case study of Kigumo District by Grace Njogu (2014), revealed that most successful businesses were attributed to entrepreneurship trainings

done based on the type of businesses ventured into or continue business training as they progress. In year 2006, the established of the Youth Enterprise Development Fund was done with an exclusive aim of reducing unemployment amongst the 61% of the unemployed youth population in Kenya. A three-year strategic plan was developed by the fund to address various aspirations and needs of the youth, and to address the challenges it had faced in the past. This study showed that ninety two percent (92%) of the unemployed Youth only had formal schooling other than job training.

Therefore, the main challenge noted in the study was that formed to succeed, a deliberate effort in including business planning, financial management and skills in entrepreneurship would be imparted to the youth before financial support was provided. This was because the community clearly showed laxity in development of entrepreneurship culture because of perceiving the funds as a political fund initiated by the government to boost its political interest. Therefore, this project established the impact of knowledge and provision of initial working capital to engage the youth in starting of their Aquaculture enterprises was seen as a key thing. This was because the youth were unable to access inputs for fish production as accessing capital was a hard task. This initiation then would enable them to progress in developing these enterprises into lasting businesses.

### **2.2.3 Market linkages and Livelihood**

A study done in Kenya on the youth enterprise development fund (YEDF) and development of enterprises (October, 2012) wanted to assess the effects of the youth development fund on the growth of small enterprises and socioeconomic development for the youth through awareness on understanding its objectives and access to loans. This study concluded that raising awareness of YEDF amongst the youth, its purposes and loan features would have an outcome on the development of small enterprises resulting in more youths applying for the loans and also use the loans pragmatically in order to pay back. According to Amenity (2011) many of the young people were not informed as it should be about the loans thus making accessibility of the loans a big challenge. Therefore, it was paramount that adequate information on YEDF objectives and loan features should be provided to the youth. Therefore, reducing the young peoples' problems would have an impact on development of enterprises in that more youths would participate in profitable activities.

The study on youth enterprises on inhibiting factors and opportunities done by Paul Omondi (January 2013) was to find out the constraints encountered by the young business persons in

gaining access to markets for their products in different sectors of the economy; and to pinpoint opportunities for the promotion of strategic marketing and market linkage arrangements for young entrepreneurs in Kenya. This research concluded that limited human capital to accomplish entrepreneurship was prone to negatively impact on the quality of new ventures, and it had the ability to limit decisions to pursue formalization thus inhibiting market penetration and growth.

A paper on linking small holder growers to markets and the implications to extension and advisory services by Shaun et al (2014) was done to explore the shifting responsibilities of agricultural extension services and the increasing efforts on the business needs and produce marketing of smallholder farmers. The important matters focused on included finding better means of coming up with policies, sustaining and coordinating services that would develop the capabilities of farmers to increase incomes by connecting various types of markets including regional and informal domestic markets, traditional cash fish markets, formal and higher value markets, and up-coming food aid and organized public markets (Poulton, Dorward and Kydd, 2010). It was noted in this project that a critical part of any long-term development strategy was to look at ways to connect the smallholder growers to markets, a strategy considered to reduce hunger and poverty. As such, it was found out by the development and research communities that achieving large-scale poverty reduction and resilience in rural communities could not be supported by agronomic services alone.

Moreover, a number of efforts had been initiated to promote mechanisms that will assist in shifting from production to market-based investment programs. These initiatives included contractual farming, certification, market analysis, and strategies to strengthen support value chain investment and local business development. The facilitation to accessing the market had been complemented by production-based systems approaches. Therefore, farmers who lacked the necessary support could be adversely affected by the market-based approaches especially when they were poised to engage with markets. Particularly, this was true when farmers were connected to high value, formal markets as shown in the case study of Nicaraguan growers who were linked to high value coffee and Aquaculture and markets (Shriver et al, 2012).

#### **2.2.4 Aquaculture empowerment and livelihood**

According to a study by Nsonga (2014), The Aquaculture subsector in Zambia produce about 10, 000 tonnes per year of fish and of this, 75 percent comes from small-scale aquaculture,

while commercial fish farmers produce the other 25 percent. Aquaculture was expanding in all ten provinces of the country, and as a result, Zambia was now one of the largest aquaculture producers in sub-Saharan Africa. This trend presented enormous investment opportunities in the sector with the government creating an enabling environment. A paradigm shift from mere management of a collapsing capture fishery to the promotion of aquaculture would reduce fishing pressure on capture fisheries and provide opportunities for improved nutrition and increased incomes for the rural poor. However, full potential in aquaculture had not been fully seized owing to a spiral of bottlenecks associated with the subsector. This in the process inhibited the growth of the sector to its full potential and the most affected by the small scale aqua-farmers with attributing factors being the lack of adequate empowerment.

In Kenya, the Smallholder Aquaculture Empowerment and Promotion (SHEP) Approach project was initiated with the aim of initiating an innovative development modality which was developed by the collaborative efforts of the government of Japan and Kenya. The aquaculture empowerment was provided to the small holder farmers through improving the capacity in management of market-oriented aquaculture farming and their technical skills to produce as per the market requirements. Through this approach, the farmers were able to raise incomes from aquaculture. Other interventions that were promoted through the SHEP initiative include business linkage establishment between service providers and the farmers, strengthening farming couples through promotion of gender equality trainings, introduction to saving culture, use of aquaculture as a form of employment and farmer-initiated market surveys. The SHEP initiative resulted in improved productivity and farmers' incomes through the aquaculture initiatives and their livelihoods had improved not only during the intervention period, but also for years after the intervention. This project's impact was seen clearly from the now self-reliance the farmer groups had and the creativity in increasing the ventures into their aquacultural farming businesses thus ensuring self-employment (JICA report, 2014).

In Sierra Leone, youths faced a disheartening constraint: an economic scenario where acquiring honest employment especially in rural areas had been largely brought about by lack of job opportunities. An array of other issues further worsens the situation due to low educational levels of many young people and inadequate work experience leading to low demand for labor. The youth employment constraint had been given precedence by the

Government of Sierra Leone (GoSL) and was a key factor to its national development agenda in both the Prosperity Agenda (2013 - 2017) and Agenda for Change (2008 - 2012).

A report based on a project called Youth Employment and Empowerment Program (YEPP), which was introduced in 2011; the support of the Sierra Leone's youth empowerment was built on UNDP's wide post-war experience. The project was intended to reinforce national strategy, coordination and policy for employment of the youth and wanted to avail basic provision of services for the young people throughout the country, including career advice, guidance and business development. The Programme concentrated on three important issues: Policy and Institutional Development; which concentrated on the Ministry of Youth Affairs (MoYA) by building adequate technical capacity and to facilitate policy development for the National Youth Commission (NAYCOM), making sure that pertinent policies were clear and synchronized and created positive influence on employment creation. Empowerment of the Youth; concentrated particularly, on working through the reinforcing of Chiefdom and District Youth Councils on promoting leadership and youth empowerment.

Employment Promotion; the provision of employment promotion services such as internship opportunities and support to micro, small and medium-sized business development were done through the effort of concentrating on supporting the young people in their move from school to work. Through this project, the leading role which UNDP took in job creation initiatives and youth entrepreneurship comprised of a functioning framework which took the lead in the establishment of five Business Development Service (BDS) hubs in Newton, Freetown, Kenema, Bo and Makeni and the designing of the BDS vision. The hubs act as centers for consolidating market info, availability of useful entrepreneurship learning's and coaching services and pro-bono legal support, and mentorship. The hubs also assist the young entrepreneurs to gain access to finance. Trained at the BDS hubs were done to approximately 850 youths (48% of which are female). As a result of this assistance, there was an expansion of about 359 businesses, of which 108 of the expanded businesses were government registered business with registration authorities including the National Social Security and Insurance Trust (NASSIT). As a result of the expansion and establishment of new businesses, 204 new jobs were created.

The 200 youth-led businesses were supported to establish their enterprises through entrepreneurship trainings and business management knowledge led by technical advisor and coaches, while another 400 youth, 50% of whom are women, were assisted through the

supply of inputs, extension services to build their individual agri-businesses and training (UNDP, Sierra Leone 2012). Therefore, to conclude, entrepreneurial skills hasten the minds of the youth providing them with a stepping stone for creating jobs and excelling in income generation. This study largely borrowed on providing technical skills on aquacultural enterprise engagement so as to ensure growth in the industry through creation of jobs for the rural youth in Kasempa.

The youth savings in developing countries report (May 2010) showed that low income youth may be a high leverage tool when they possess savings accounts to help them achieve both financial inclusion and youth growth. Some recent proof shown from the study conducted on Youth Savings Accounts (YSAs) had shown that there was need to completely comprehend the potential responsibility of YSAs as a progress tool in different contexts, thus require more observations in their performance in a broad selection of cultural, economic and institutional conditions, and to foster visions from cross country assessments.

A paper done by the Rwandan Government (2011) on programs dealing with financial access to youth and women revealed that women and youth were partially recognized in the financial sector where an estimated 12% of total credit was provided to women even though they were important contributors to private enterprise. Lending to women comprises a portfolio of 22% and 23% specifically from MFIs and SACCOs respectively. This was even with the 2011 Establishment Census showing that with the exclusion of women participation in agriculture, 26% of the enterprises were led by women. The paper showed that young people were relatively equally constrained.

Young people could not invest in productive enterprises due to underemployed and had limited financial accessibility. Unfortunately, the amount of money to be lent to young people from the available financial sector was not indicated in the data. An initiative by the Rwandan Government was to start financial programs that gave Capacity building and training with special importance to financial literacy (to address the non-financial barriers) and access to finance and programs on credit enhancement (to address the financial barriers). Furthermore, the program was directly linked to the Financial Sector Development Program (FSDP) which had aggressively targeted 80% of the population to ensure access to formal finance by 2017 and this program would play a substantial role towards reaching this target of financial inclusion.

A study based on an integrated approach to empower youth on microfinance Project (YMF), had demonstrated success through an integrated youth economic empowerment program that promoted youth savings groups (YSGs) and delivered financial education, life skills, and entrepreneurship training to nearly 90,000 youth (age 15-24) in Niger, Senegal, and Sierra Leone from 2009 to 2014. YMF demonstrated that when provided with appropriate financial instruments and training, Women and youth could make informed choices about how they manage their financial and non-financial assets by enhancing their economic self-reliance and contribute to household well-being through increased investments in nutrition, education, and health. This study was done to comprehend how young peoples' savings groups can put in to the fight against youth unemployment, through alleviating the challenges to entrepreneurship. In this study, the emphasis to introduce the aspect of village savings and loaning associations to the rural youth was because when compared to credit-led models. The village savings and loaning have regular savings which were small, social insurance, participatory management; low pressure to borrow; and access to large amounts that can meet family demands which all make savings groups eye-catching to youth. Therefore, this became particularly critical that the policy makers were drawn to the significance of assisting initiatives that were youth based like youth savings groups because they could simply be revolved into a platform for youth entrepreneurship. This could be an effective way of combating the unemployment constraint currently bedeviling the country.

## 2.4 Summary of Research Gaps

This study addressed the importance of empowering the rural youth to improve their livelihoods. The research gaps to be addressed by this study include; Lack of innovative and sustainable approaches that will enhance productivity amongst the rising youth population. It also addressed the effects of engaging youth in aquaculture production and the provision of both technical and financial knowledge that would expose the youth to reduced rate of economic improvement or growth as it hindered their ability to invest and grow any business.

**Table 1 Summary of Literature and Research Gaps**

<b>Author and year of study</b>	<b>Study</b>	<b>Findings</b>	<b>Study limitations</b>	<b>Focus on current study</b>
Nina Nayar (2014)	An integrated approach to empower youth in	Youth participating in savings groups	The youth lack the means to access financial	This study included financial

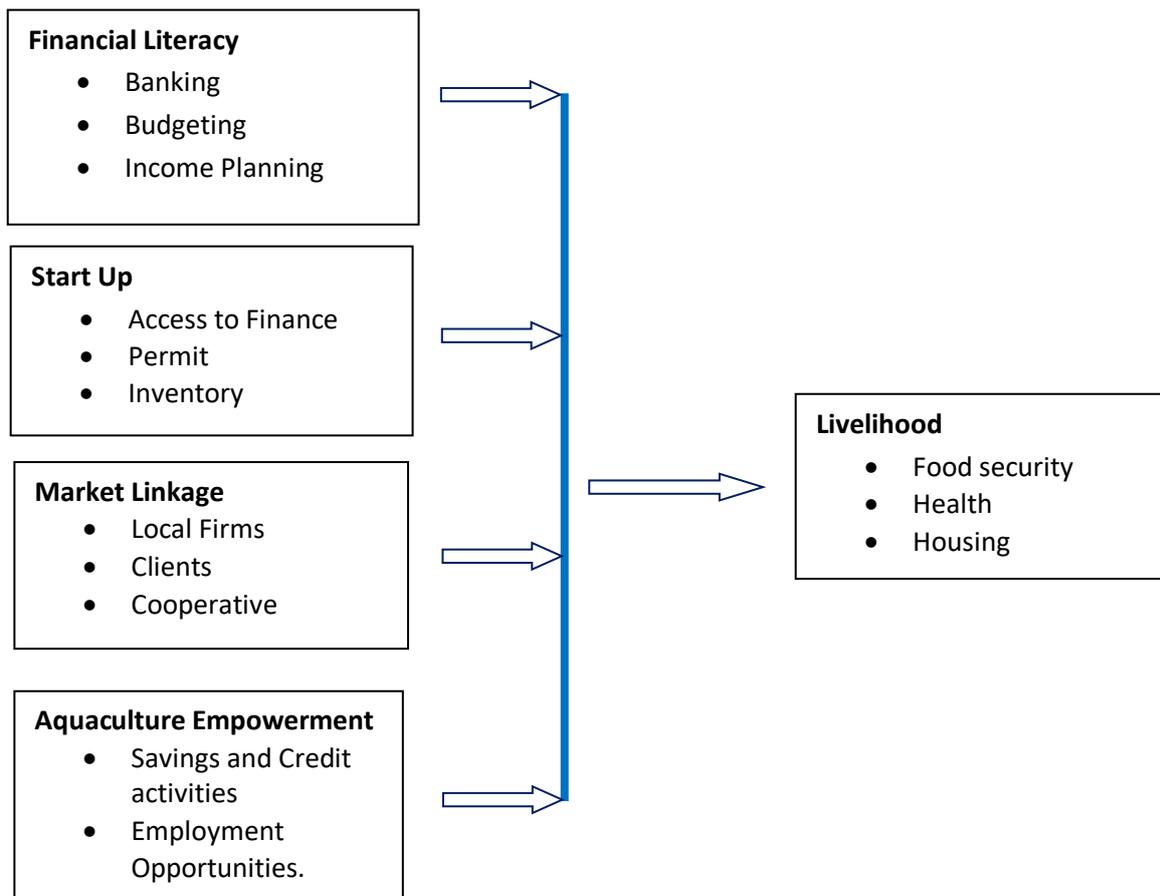
	Niger, Senegal and Sierra Leone	gain confidence in community economic activities.	education and services	literacy as a youth empowerment approach.
Bernard Muniyao Muiya (2014)	The nature, challenges and consequences of urban youth unemployment.	Youth in urban set up experience a lot of problems especially when transitioning from education to productive system	Inaccessibility to ready employment for urban youth	Market linkages on livelihoods to avoid challenges of unemployment faced by youth in urban areas
Ipenyl Peter Edor (2012)	Social Studies education and entrepreneurship for youth empowerment in Nigeria	Entrepreneurship skills to be introduced and used for assist students who are jobless to be empowered on self-employment	The concept of social studies and entrepreneurship activities and how well they could solve anti-social problems, which will solve problems of youth employment	Financial literacy training on livelihoods to help youth to be able to save money from their earning in engaging.
Khaoya Bulimo Jacob and Dr. Makori Mononge (2016)	Influence of youth enterprise development fund in Kanduyi Constituency	Youth engaged in various businesses after accessing the YEDF loans were seen to lack valuable knowledge on entrepreneurship and networking to penetrate markets for their products was also a challenge.	Inaccessibility to capital for business start-up for the youth to sustain their livelihoods	This study included engagement of the rural youth in Aquaculture enterprises for self-employment to improve their livelihoods
Yuchen Feng (2012)	Empowering youth in Resource poor community in Kenya through ICT training	It was evident that young people can be empowered through ICT trainings, however it was noted that not all young people have the opportunity to access and benefit from the technology	Lack of enhanced technology that can be used to uplift the economic status of the individual the rural youth	This study includes empowering the youth with start-up capital as a resource to commence aquaculture enterprises to improve their livelihoods

## 2.5 Conceptual Framework

A conceptual framework is a brief account of the phenomenon being researched accompanied by a visual or graphic depiction of the main variables of the research (Mugenda, 2008). From the conceptual framework shown in Figure 2.1 (below), the independent variable is youth empowerment which were operationalized as financial initiatives, market linkage and employment. The dependent variable in the study was on livelihood which took into consideration the general livelihood for the respondents. The moderating variables to measure the general livelihood were include; aquaculture enterprises, consumption patterns, income pattern, education, age and gender.

Figure 2.1 below shows the relationship amid dependent variables and independent variable. The independent variables were financial literacy training, startup capital, market linkage and aquaculture empowerment and the dependent variable was the livelihood. The intermediate variables were consumption pattern, income pattern, education, age and gender.

**Figure 1 Conceptual Framework**



The above conceptual framework was thus used to guide the study in the process of understanding the relationship between and among the various variable in the research.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.0 Introduction**

This chapter presented the research methodology that was used by the researcher in data collection and analysis processes. It was thus broken down in various parts that included research design, sampling methods, study population and sample size, instrument of data collection, data analysis techniques, and ethical considerations.

### **3.1 Research Design**

In this research, a cross sectional design was used. This research design employed both the qualitative and quantitative research paradigms in data collection and analysis. In this case, a Qualitative Research design was defined as a systematic and primarily exploratory subjective approach that was used to describe life experiences and give them meaning, (DeFranzo, 2011). The use of this paradigm was to increase understanding of basic reasons, opinions, and motivations while providing insights into the issue and/or helped to improve ideas or hypotheses for possible quantitative research, (Ibid, 2011). On that note, the Qualitative Research design was used to discover tendencies in thought and opinions, and looked deeper into the problem. In addition, this approach was adopted to ensure that the other compliments information obtained by one design. Moreover, Quantitative design was in form of statistical representation and interpretation of information, which was gathered from the various respondents. To that effect, the use of this design ensured that the other compensated the weaknesses of one design.

### **3.2 Study Population and Sample size**

The study population was gotten from Kasempa District of Zambia's North Western Province, from which a sample population was going to be drawn. The population selected for the study was mainly due to the fact it was readily available for the completion of the study as respondents were easily and conveniently accessible. Therefore, this sample size comprised a total of composed of One Hundred Ten (110) all of whom were resident youths of Kasempa. The sample was biased based on the latter variables indicated.

### **3.3 Sampling method**

The sampling method that were employed was the quota sampling method. In this case, the quota sampling method was defined as a non-probability sampling technique where the collected sample had similar proportions of individuals as the entire population in connection with known characteristics, traits or focused phenomenon, (Gravetter and Forzano, 2011). As such, this sampling method was adopted, as it enabled the study make proper generalization to represent the whole population. Besides, it gave the study population equal and independent chance of selection and participation in the research. The other reason for the use of this sampling technique was due to that the fact that the study did not have a sampling framework, and so, the samples (subsets of the total population) were going to be chosen on grounds of convenience, that were stratified, based on locality within district. As a result, such a design was used to ensure that the flaws of qualitative data were lessened and enhanced by quantitative data.

### **3.4 Instruments of Data Collection**

The research employed instruments of data collection the self-administered questionnaire. The self-administered questionnaire was understood as a research instrument that consists of a series of questions (or other types of prompts) for gathering information from respondents, (Gault, 1907). In this regard, the self-administered questionnaire to be used in this research constituted a series of questions. This instrument had been picked a desirable by the researcher due to the advantage in that it was cheap; and would not require as much effort from the questioner as the interview guide and as such, and consist standardized answers that would make it simple for the respondents to provide answers therein. Hence, for the purpose of this study, the interview guide and self –administered questionnaire were used as instruments in gathering data.

### **3.5 Data Analysis Techniques**

The collected data was analysed using the SPSS version 25.0 and Microsoft Excel from the 2016 Microsoft Package to facilitate analysis of quantitative data. SPSS had been chosen as the preferred data analysis software due to its ability to process, and mathematical manipulate data through its inbuilt functions. On the other hand, Microsoft Excel was used because of its ability to generate diagrams including pie charts, histograms, line graphs, bar graphs and others to present the quantitative data graphically.

Additionally, analysis of qualitative data involved the examination and interpretation of associates and themes in textual data and determination of how these associates and themes helped in answering the research question at hand. Hence, qualitative content analysis was used to achieve this.

### **3.6 Validity and Reliability of the Research Instrument**

#### **3.6.1 Validity**

Validity shows whether the items measure what they are designed to measure (Borg and Gall, 1989). It talks about the degree to which a study precisely assesses or reflects on the exact concept that the study is trying to measure. It is the degree to which results acquired from the analysis of data actually portrays the phenomenon under study and the preciseness and meaningfulness of inferences, which are based on the research results.

A pilot test was done to aid in establishing the clarity, relevance, suitability and accuracy of the research instrument. Borg and Gall (1989) noted that two to three cases are sufficient for some pilot studies. For this study, a sample of 10 is preferred. The sample of ten was picked from members of other groups that are not part of the groups scheduled to take part in the survey. The pilot assisted the study to recognize the items which could have been inadequate and made necessary corrections.

According to Borg and Gall (1996), the content validity was inspected to confirm that the instruments would respond to all the research questions. The researcher then made adjustments corrections, and additions centered on the analysis of the pilot results, to some research instruments with expertise advice from the supervisor.

#### **3.6.2 Reliability of Instruments**

Reliability is the uniformity of research measurements, or the degree to which a research instrument measures the same way each time it is used under identical conditions with the same subjects. In other words, it is the repeatability of a research measurement. If an individual scores the same on a test given twice, then the measure is considered reliable.

In this study Cronbach's Alpha was used to compute correlation values among the responses of the questions of the questionnaire. Cronbach's alpha splits all the responses of a questionnaire and runs correlation values for them all. Finally, the computer output provides

one number for Cronbach's alpha and similarly to the correlation coefficient, the nearer the Cronbach's alpha value is to one, the higher the reliability estimate of the research instrument. It is important to note that reliability is estimated, not measured.

The main aim of Cronbach's alpha is to give an indicator of the internal reliability or uniformity of items in a multiple item scale or index (Vogt, 1999). For scales, higher levels of a reliability coefficient are associated with lower random error and greater measurement of the true score. Since it is based on the number of items included in the scale, reliability will increase as the number of items increases. Reliability coefficient of Cronbach's alpha value greater than (or equal to) 0.7 are generally accepted as indicative of a reliable scale, while those less than 0.7 are generally not considered a reliable scale.

### **3.7 Ethical Considerations**

In reference to Schurink (2005), Ethical issues are the concerns and dilemmas that arise over the proper way to execute research more specifically not to create harmful conditions for the subjects of inquiry, humans, in the research process. Thus, the researcher was very much aware of this responsibility, and so the research guaranteed to be sensitive and respectful of all participants and their rights. The study further made sure the explication of objectives and all respondents follow procedures. It also ensured the maintenance of anonymity were questionnaires only identifiable by numbers and no participant names were reported alongside the research findings hence treating all data collected with absolute confidence and used it purely for the study's purpose(s). On the other, no respondent would not at any point be harmed, threatened or coerced into participation as participation is voluntary, and no penalty or ramification of any nature would be suffered by those that would not participate. Finally, the research made certain that respondents were not reported alongside the research findings unless with their permission.

## CHAPTER FOUR: RESEARCH FINDINGS, DISCUSSION AND INTERPRETATIONS

### 4.1 Introduction

This chapter presents the findings and discussions of the study as captured in the analysis of the objectives.

### 4.2 Response Rate

A total of 110 questionnaires were distributed to the sampled respondents. Amongst these, 101 respondents were able to respond to the questionnaires. The study achieved a response rate of 91.8% (N=110)

**Table 2 Response Rate**

Sample	Response	Rate
110	101	91.8%
110	101	91.8%

*Source: Field data, 2020.*

The response rate is greatly creditable since it was far above the threshold of 75% that is proposed for analysis of the data by Mugenda (2008) who states that the response rate of 50% is adequate for analysis and reporting while a rate of 60% is good and a response rate of 70% and above is excellent. This high rate was achieved since questionnaires were administered under close supervision of the researcher thus satisfactory to make conclusions of the project.

### 4.3 Reliability Test

The reliability test was calculated using Cronbach's alpha whose aim is to give an indicator of the consistency or internal reliability of items in a multiple item scale or index (Vogt, 1999). Reliability was tested with the employability of Cronbach's alpha coefficient to obtain a coefficient.

**Table 3 Reliability Tests**

Variable	Cronbach's Alpha	N of Items
Financial Literacy	0.694	7
Provision of start-up capital	0.688	16

Market Linkage	0.732	7
Aquaculture empowerment	0.795	11
Average	0.727	

Source: Field data, 2020.

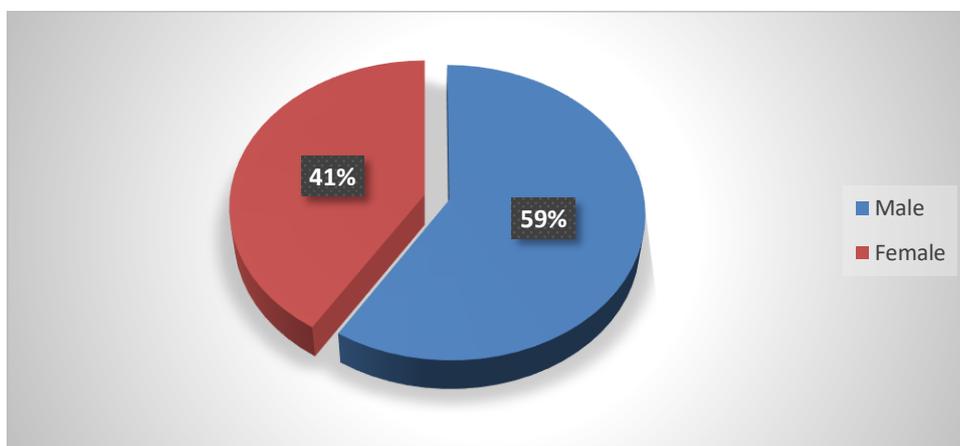
As shown in the findings presented in Table 3, the Cronbach’s Alpha for the four categories obtained were 0.694, 0.688, 0.732 and 0.795. As a general rule, a reliability coefficient greater than or equal to 0.7 is considered acceptable and a good indication of construct reliability as indicated by Reid (2006). Therefore, an average reliability coefficient of 0.727 showed that the instruments had a higher reliability that encouraged the researcher carry on with the data collection. These average values exceeded the prescribed threshold of 0.7 (Mugenda and Mugenda, 2008).

#### 4.4 Demographics Characteristics

##### 4.4.1 Gender Distribution

The researcher sought to establish the gender of the respondents.

**Figure 2 Gender Distribution**



Source: Field data, 2020.

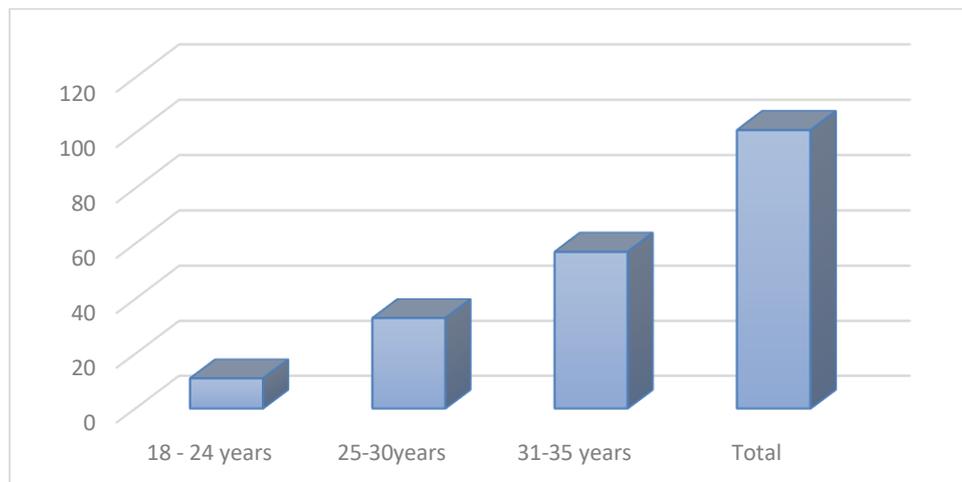
As shown in the results from Figure 2, the majorities (59.0%) of the respondents were male and 41% were female. The analysis showed that there was almost an equal participation of the males and females in the aquaculture production activities. These results indicated that aquaculture production was mainly dominated by male counterparts. These in line with Boserup (2010) who argue that access to land for women was difficult and cannot access

credit for their independent agricultural activities since they are unable to provide collateral. Gender is described as a socio-economic consideration that is useful in analyzing the responsibilities, roles, constraints and opportunities of both women and men along diverse religion, ecological lines, and ethnic (Odiaka, 2004).

#### 4.4.2 Composition of Respondents by Age

The researcher sought to establish the age of the respondents.

**Figure 3 Composition of respondents by Age**



*Source: Field data, 2020*

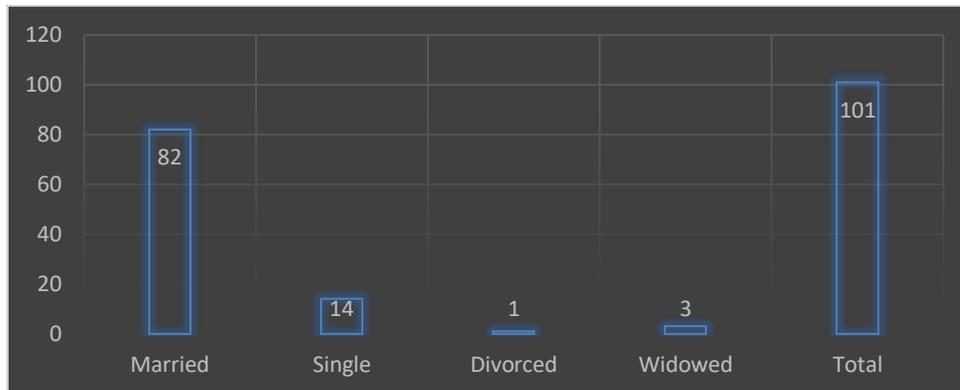
Figure 3 showed that majority of male and female who were empowered were between the age of 31-35 which indicates 57% of the respondents, while those under the age of 25-30 years had 33 %, and the remaining 11% were of ages between 18-24. This indicated that older youth have more potential of being productive entrepreneurs after being trained and empowered. Metzger et al. (2009) showed that middle and late adolescents may benefit from exposure to various types of opportunities and peer groups for identity development while early adolescents may benefit from the influence of positive adult role models.

The help associated with activity participation for rural youth were the same across age groups, which imply that the growing experiences and resources given by involvement in activities are equally significant across ages. While there is similarity in the general assistance, the course through which activities put in to positive development may differ across age (Metzger et al., 2011)

### 4.4.3 Marital Status

The researcher sought to establish the marital status of the respondents

**Figure 4 Marital status**



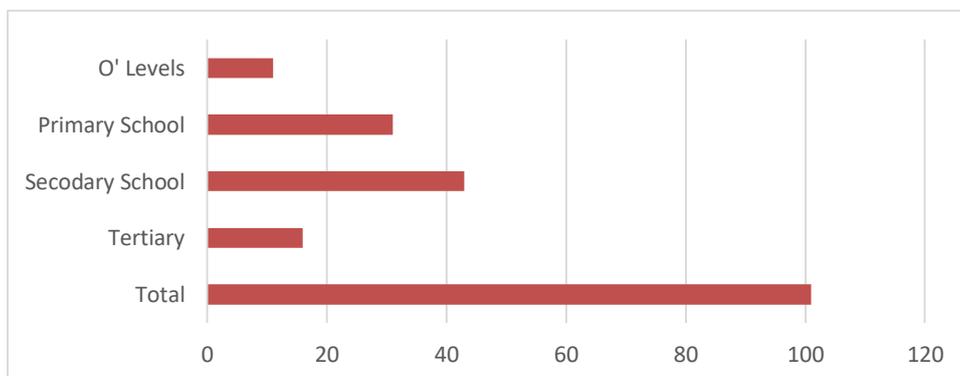
*Source: Field data, 2020.*

From Figure 4, the study found out that 82% of the respondents were married, only 14% were single, 2% divorced and 3% widowed. The results show that the highest respondents were married as compared to singles, divorced and widowed youth. Most of the respondents were married and as such Eccles et al, (2014) found that married people are able to coordinate better and identify with their participation in any agricultural activity and construct meaning from them hence forming an organized activity involvement which is a central component of identity development.

### 4.4.4 Level of Education

The researcher sought to establish the level of education of the respondents.

**Figure 5 Level of Education**



*Source: Field data, 2020.*

From figure 5, the results from the project found that most of the respondents engaged in aquaculture enterprise farming were not highly educated as only 16% had schooled up to tertiary level, 43% of the youth respondents had reached secondary level, and 31% had reached primary level while O level had 11% respondents. The results show that the highest level of education reached by the youth is secondary school level compared to primary, tertiary, and O level. Therefore, this means that accessing white collar jobs in Kenya is very competitive and most of the time requires people who are highly educated hence these findings explain the reason why many of the rural youth are engage in farming activities as majority of them have their highest level of education as secondary school level.

These findings are in line with the findings of Ani (2010) who observe that educating the farmers generally enhances fish production amongst the farmers, seemingly resulting from their efficiency in using new production technologies. Linking to one’s school and its resources may be particularly significant for rural youth to acquire the educational help associated with the agricultural activity.

#### 4.4.5 Fish Produced

The researcher sought to establish the fish produced by the respondents.

**Table 4 Fish produced**

<b>Fish Produced</b>	<b>Frequency</b>	<b>Percent</b>
Domestic Consumption	78	79
Export	23	21
<b>Total</b>	<b>101</b>	<b>100</b>

*Source: Field data, 2020.*

It was also found that the fished produced by the youth farmers were both for local and export market. Seventy Nine percent of the respondents grew Fish for domestic consumption while 21% respondents grew fish for export. The results show that there is a slightly higher preference for growing local fish compared to the export.

These results concur with the findings of Gillespie (2012) who observe that smallholders are able to get different types of diet and also purchase more essential items for the household as a result of an increase in income. This has a tendency to suggest a better dietary quality. For instance, producing commercially is frequently related with higher incomes and more

production of food; thus, the smallholders can boost their food security and nutrition, allowing families and individuals better access to nutritious foods. Access to education and health care, either at the national or household level can be improved by economic growth from agriculture (Hawkes et al., 2012).

#### 4.4.6 Fish production

The researcher sought to establish the reason for fish production by the respondents

**Table 5 Fish Production**

		<b>Frequency</b>	<b>Percent</b>
<b>Reason for fish production</b>	Self-Employment	<b>93</b>	<b>92.1</b>
	Income	<b>4</b>	<b>4</b>
	Investment	<b>3</b>	<b>3</b>
	No alternative for income	<b>1</b>	<b>1</b>
	<b>Total</b>	<b>101</b>	<b>100</b>

*Source: Field data, 2020.*

From Table 5, the results unearthed that most of the respondents' reason for fish production was solely for self-employment at 92.1%, since getting white collar employment continues to become just but a dream for most people not only in Kasempa but also in Zambia as a whole. Only a few were after getting income (4%), investment (3%) and 1% had no other alternatives for income.

Waddington, (2010) argued that to resolve challenges of the farming community and to get technologies, skills, and information to better their well-being and livelihoods, it was largely a precursor of fish production which includes various organizations that facilitate and support individuals practicing in agricultural production. Since a livelihood comprises the capabilities, assets and activities required for a means of living; it is evident that provision extension services in agriculture intend not only to increase income and productivity but also to improve multifaceted aspects of rural life (Birner, 2014).

#### 4.4.7 Education and Financial Literacy Training

The researcher sought to establish the extent to which education level hindered the provision of the financial literacy trainings to the respondents.

**Table 6 Education and financial Literacy training**

		Level of Education					Total
		O' Level	Primary School	Secondary School	Tertiary	None	
Extent to which the education hinders understanding of these trainings	Very Great Extent	0	9	12	1	1	23 29.9%
	Great Extent	1	4	4	0	0	9 11.7%
	Undecided	2	6	2	1	0	11 14.3%
	Small Extent	3	1	6	2	0	12 15.6%
	Very small extent	4	6	9	3	0	22 28.6%
	Count	10	26	33	7	1	77
Total	% of Total	13%	33.8%	42.8%	9.1%	1.3%	100%

*Source: Field data, 2020*

Table 6 shows that 29.9% of the respondents thought that education level indeed hindered understanding of training offered to a very great extent. These views were conveyed by those youths who had secondary school (15.6%) and primary school 11.7%). Other response was at 11.7% who thought it hindered to a great extent, 14.3% were undecided, another 15.6% said it was on a small extent while 28.6% said it hindered to a very small extent. These varied results show that the respondents did not reach a consensus on the issue. This also calls for improvement in the way the trainings are conducted since it should be done to help all farmers despite their education background.

Plan International Report (2014) show that the ultimate goal for empowering the youth's on financial literacy is to terminate the sequence of economic poverty by providing the young people with a feel of hope and endow them with the practical skills that can assist them understand entrepreneurship and engage in self-employment as effective career options. Grace Njogu (2014) revealed that most successful businesses were attributed to

entrepreneurship trainings done based on the business type engaged in or carry on with business training as they advance.

#### 4.5 Descriptive Statistics for the Research Variables

This section presents the findings based on the research objectives of this study. The study used descriptive and inferential statistics in the analysis and discussion

##### 4.5.1 Financial Literacy Training and livelihood

The section sought to assess the literacy levels of the aquaculture enterprise farmers and the running of their business since the main aim of the engagement in the activity is to get income. Financial literacy among youths in Kasempa is hindered by the level education as per table 6 which complicates their economic lives making youth vulnerable to socio-economic issues. The following factors were assessed and the results are as presented in tables 7.

**Table 7 Financial Literacy Trainings**

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Financial Records Challenges	98	1.38	0.487
Any financial training	101	1.31	1.056
Whether financial literacy training was successful	88	1.85	0.878
Whether level of education is a hinderance to understanding these training	91	1.69	0.464
Extent to which education hinder understanding of these trainings	83	3	1.631
Training benefits	90	1.7	0.8
Valid N	70		

Source: Field data, 2020.

Table 7 shows that the mean for financial records challenges was 1.38 with a standard deviation of 0.487 which is further away from the mean indicating that the there was a greater variation in the responses from most of the respondents. This is in line with Germain (2010) who observe that recordkeeping is perceived as an odd job by most business operators; a required duty to just retrieve some more required money at the end of a particular period of

time for example after a year, thus to many businesses operators accurate record keeping is not as important. Therefore, it became a recipe of failure, for a large number of these enterprises from the beginning.

The respondents agreed that they all received some financial literacy training as the findings show that the mean was at 1.31 and standard deviation was at 1.056 which is closer to the mean indicating that there were very little variations in the responses from the respondents. These findings concur with the findings of King and McGrath (2012) who observe that training is essential in ensuring the farmers are equipped with the knowledge of keeping the record for every transaction they make and hence be in a position to account for what they have put into taken out of the enterprise. Clelland (2011) the business men require to have some basis of accounting irrespective of the size of their enterprises.

The respondents found the trainings to be useful according at different levels as the standard deviation at 0.878 is further away from the mean of 1.85 indicating that there were varied responses to the usefulness of the financial literacy trainings. Therefore, this indicates that the farmers highly benefited from the training conducted and welcome the idea since it helped them be informed on the necessity of keeping records and calculating profits and losses made. According to Stone (2012), training has the clear task in the attainment of an institutional goal by including the interests of the workforce and organization.

The respondents also had a small variation in their responses to how they felt that their level of education did not hinder their level of understanding the financial literacy trainings as shown by the mean at 1.69 and the standard deviation at 0.464. At a mean of 3.00 and standard deviation of 1.631 clearly shows that the respondents had different views on to the extent at which the level of education hindered them from understanding the financial literacy trainings despite the fact that most of them had not gotten any further training apart for the basic secondary education as shown in the demographics. The findings further indicate that the respondents benefited from the trainings as indicated by the mean on training benefits at 1.7 and standard deviation at 0.8. These findings are supported by a research done by Khaoya and Makori (2016) on the influence of youth enterprise funds in Kanduyi Constituency, a fund that provided access to capital for youth to start businesses but lacked the business skill to maintain manage them, hence their findings show that it is imperative to support youth with entrepreneurial skills which will enable them to manage their businesses more effectively hence enhance their economic growth.

The study analyzed the relation between financial records challenges and provision of any financial training as shown in table 8.

**Table 8 Financial records challenges**

				Any Financial Literacy Training		Total
				Yes	No	
Financial Records Challenges	Yes	Count		46	15	61 62.2%
	No	Count		31	6	37 37.8%
Total	Count			77	21	98
	% of Total					100%

*Source: Field data, 2020*

Table 8 shows that 62.2% of the respondents faced challenges in keeping financial record despite having received financial trainings. Thirty-seven-point eight percent of the respondents did not have any challenges in keeping any financial records as they had been trained on financial literacy. Bowen (2009) examines that there is a convincing association between level of training and the business performance in the business management specifically in record keeping of the business finance. Keeping proper records of the business transaction is an important factor in business management.

These results show that 78.6% of the respondents received financial trainings and 21.4% of the respondents did not receive any financial literacy trainings. This shows that there was high number of respondents that face financial record keeping challenges despite having a high number of respondents receiving the financial literacy training. This means that trainers need to find out the specific area that is a challenge to the youths and device the best training method to disseminate the financial record keeping curriculum. Otenyo and Matanda (2008) observe that in many people in rural settings lacked managerial experience and training. The actual managers or owner of these businesses build their personal methodologies to management, through a course of trial and error.

#### 4.5.2 Provision of start-up capital and livelihood

**Table 9 Interaction with Farm Africa**

		Frequency	Percent	Valid Percent	Cumulative Percent
<b>Valid</b>	Fair	6	5.9	5.9	5.9
	Good	30	29.7	29.7	29.7
	Very Good	65	64.4	64.4	64.4
	<b>Total</b>	<b>101</b>	<b>100.00</b>	<b>100.00</b>	100.00

*Source: Field data, 2020.*

The findings on the interaction with Farm Africa show that the respondents felt that it was generally good and very good as shown by the percentages 29.7% and 64.4% respectively. This indicates that the farmers welcomed the organization and participated in their project fully. The farmers were able to start the aquaculture enterprises using different means. According to YEEP (2011) where UNDP took the leading role initiating youth entrepreneurship and job creation initiatives and helped the training of 850 young entrepreneurs on BDS and establishment of 359 businesses.

**Table 10 Formation of Aquaculture Enterprises**

		Frequency	Percent	Valid Percent	Cumulative Percent
<b>Valid</b>	Own Initiative	9	8.9	9.2	9.2
	Assistance from Experience Farmers	1	1.0	1.0	10.2
	Assistance from parents	4	4.0	4.1	14.3
	Got assistance from farm Africa	61	60.4	62.2	76.5
	Used Own savings	19	18.8	19.4	95.9
	Borrowed Loan	4	4.0	4.1	100.0
	<b>Total</b>	98	97.0	100	
<b>Total</b>		<b>101</b>	<b>100</b>		

**Source: Field data, 2020**

The findings on how most of the aquaculture enterprises were started show that 62.2% of the respondents received assistance from Farm Africa to start their aquaculture enterprises with only 19.4% using their own savings to start up the enterprises, the rest were 9.2% on own

initiative, those who borrowed loans and were assisted by parents 4.1% and 4.1% respectively and 1.0% were assisted by experienced farmers. This confirms that the youth lack access to capital to finance their own businesses thus rely heavily on other organizations to jump start their business initiatives so as to prosper as entrepreneurs.

These findings agree with the findings of Daniels (2009) who claims that the significance of aquaculture can be validated by its advantages like provision of raw materials for industries, high returns per unit area, high export value, production of more food energy, high per unit area yield, better use of undulating lands, best utilization of wasteland, whole engagement by a grower/laborer, and stabilization of peoples' empowerment by providing employment opportunities.

**Table 11 Provision of start-up capital**

	<b>N</b>	<b>Mean</b>	<b>Std Deviation</b>
Whether Aquaculture farming business is good	99	1.10	1.005
Interaction with Farm Africa	101	1.42	.604
Youth Empowerment Support (YES)	96	1.10	.307
Always be provided with YES	100	1.93	.924
Rate YES support	99	1.6	.669
Whether startup capital enabled you work productively	99	1.04	.198
Valid N	92		

**Source: Field data, 2020.**

Aquaculture production seems to be a good business venture as the respondents felt that it was a good business based on the mean at 1.1 and standard deviation at 1.005 which is closer to the mean indicating that there was very little variation in the responses. This concur with Muriira (2006) who found that foreign income, air-cargo space availability, the real exchange rate and the concessions under Rome Conventions all positively influence the volume of aquacultural exports from Zambia.

The findings from the descriptive analysis show that the interactions of Farm Africa project YES were highly appreciated with little variation in their responses as shown by the means 1.42 on interaction with Farm Africa, 1.93 on always be provided with YES support and 1.6

on YES rate support which had standard deviations of 0.6.4, 0.924 and 0.669 respectively. However, the findings also indicate an aspect of dependency syndrome as farmers purpose to rely on Farm Africa support for their business which is not sustainable. These findings further support Khaoya B. J. and Dr. Makori M. (2016) research on the influence of youth enterprise funds, a fund that provided access to capital for youth to start businesses but lacked the business skill to maintain manage them, their findings show that the youth are in need of both capital and knowledge on entrepreneurship so as to succeed in their business ventures.

**Table 12 Income Generated**

	<b>N</b>	<b>Mean</b>	<b>Std Deviation</b>
If monthly income has increased since start of fish farming	99	1.01	.101
Range of income per month before YES intervention	101	1.93	.711
Range of income per month after YES intervention	101	2.67	1.106
Having access to different food types influence your health status	99	1.09	.289
Whether income improved your housing	97	1.07	.280
Income influence number of meals taken in a day	96	1.29	.457
Valid N	91		

*Source: Field data, 2020.*

These findings show that the start- up capital provided by Farm Africa’s project has seen a tremendous increase in the farmers’ monthly income at a mean of 1.01 and a standard deviation of 1.01 indicating that there were no variations in the responses. An improvement on the incomes generated on a monthly basis can be seen by the means of 1.93 and 2.67 for incomes generated before YES’s interventions and after YES’s interventions with standard deviations of 0.711 and 1.106 respectively indicating slight variations in the responses. To some extent the incomes have enabled the farmers to access different types of foods, increased the number of meals per day and seen an improvement in their housing as per the means 1.09, 1.29 and 1.07 respectively and standard deviations at 0.209, 0.457 and 0.26 respectively.

The results indicate that the incomes generated by the farmers' after the provision of startup capital have had some impact in their livelihoods. These findings are supported by the Maslow's Hierarchy of needs theory (1970) that states that each need must be satisfied in turn, starting with the first, which deals with the most obvious needs for survival itself. Therefore, the youth were able to reach some satisfactory level for their basic needs on food, shelter and health as the results clearly indicated that they were able to access different types of foods have increased number of meals and were able to improve the status of the housing.

#### 4.5.3 Market Linkage and livelihood

**Table 13 Engagement of market supplied**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Through personal Market search	7	6.9	7.1	7.1
	By organisation	56	55.4	56.6	63.6
	Through other farmers	35	34.7	35.4	99.0
	By chance	1	1.0	1.0	100.0
	Total	99	98.0	100.0	
Missing	System	2	2.0		
Total		101	101		

*Source: Field data, 2020.*

These findings show that most respondents got involved with the current markets they supply through a linkage by an organization depicted by 56.6% response. The other respondents interacted with the market through information from other farmers and personal market search indicated by 35.4% and 7.1% respectively. Only 1% of the respondents engaged with the market by chance. These findings are supported by Shaun et al. (2014) on a paper on small holder growers being linked to markets and the effects to advisory and extension services which was done to explore the agricultural extension services responsibilities and the developing emphasis on the business and marketing need of small holder growers. This study showed that there was a need to help the small holder farmers in finding better means in coordinating sustainable services that would develop the capacities of the growers to increase incomes by connecting them to different types markets comprising of the regional and

informal domestic markets, emerging structures and food aid markets hence easing poverty (Poulton et al., 2010).

**Table 14. Engagement in contract farming**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	6	5.9	6.1	6.1
	Yes	93	92.1	93.9	100.0
	Total	99	98.0	100.0	
Missing	System	2	2		
Total		101	100		

*Source: Field data, 2020.*

These findings show that 93.9% of the respondents have working contracts with markets and only 6.1% do not engage markets through contracts. This shows that they have more confidants in dealing with export fish than local consumption due to availability of a well-defined market. Birner et al. (2014) argue that farming using contracts has been a reality for many years as a way of shaping up the commercial agricultural production of both large- and small-scale growers. Changes in consumption habits like the increasing number of supermarkets in many countries, the developing role provided by fast-food outlets, and the continued expansion of world trade in fresh and processed products; have also provided the use of contract farming.

**Table 15 Market where produce is sold on contract**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Both	22	21.8	22.2	22.2
	Local Market	23	22.8	23.2	45.5
	Export	54	53.5	54.5	100.0
Total		99	98.0	100.0	
Missing	System	2	2.0		
Total		101	100.00		

*Source: Filed data, 2020.*

These results show that 54.5% of the respondents sell their produce directly to export markets, 23.2 % to local markets while 22.2% of the respondents sell their produce to both

local and export markets. According to the Ministry of Agriculture (2012) small scale farmers provide 2% of the total 4% produce on the aquacultural exports compare to 90% the total aquacultural production utilized in the domestic market. Since the majority contributors to this sector are the small holders, it is prudent to ensure fish productivity improvement while aiming at reducing the cost of production through maximum utilization of area under production to increase revenue (Minot and Ngigi, 2002).

**Table 16 Gender participation in marketing**

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Women active in marketing farm produce	100	1.05	.219
Men allow women to be active in marketing	100	1.03	.171
Valid N	100		

*Source: Field data, 2020.*

From a mean of 1.05 and a standard deviation of 0.219 shows a small variation in response indicating that women participate in marketing of farm produce, while a mean of 1.03 and standard deviation of 0.171 shows that the respondents agree that women are allowed by men to actively participate in marketing activities within their societies. The results show that women were allowed to participate in marketing activities within these communities and amongst the youth. These findings concur with the findings of Khaoya and Makori (2016) research findings where they emphasized on the need of exposing the rural youth to marketing networks for their products. It was seen that marketing was a challenge especially after the youth's had been provided with loan as working capital and fail to sell their produce leading to loan defaults and youth financial frustrations

These results are also supported by a working paper by FAO (2011) on women's role in Agriculture which showed that about 43% women participated in agriculture mainly in the developing countries with a focus on the agricultural labour force globally. This paper implied that there are considerable variations in the involvement of women in rural labour markets across regions, but invariably women are over represented in part-time and seasonal work, unpaid, and the evidence available implies that women are always paid lower than men, for the similar work. A re-affirmation by this paper supports the results as it depicts women's critical support to agriculture and rural enterprises across the developing world.

#### 4.5.4 Aquaculture empowerment and livelihood

This study sought to assess the importance of savings and credit to rural youth engagement in aquacultural activities.

**Table 17 Savings and credit**

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Do age limit exist for participation in savings and credits activities	101	1.94	2.063
Participate in savings and credit activities	101	1.17	.376
Whether credit or loan is a source of capital for business	94	1.50	2.184
Is age a hindrance to accessing loans in credit institutions	101	1.35	1.062
Whether you have ever accessed credit for your aquaculture	99	1.34	.477
Pay loan consistently without defaulting	88	1.03	.183
Pay from aquaculture enterprise income	89	1.08	.271
Borrowed credit in form of farm inputs	99	1.67	1.069
Would you recommend a saving culture to fellow youth	99	1.03	.172
Valid N	80		

*Source: Field data, 2020.*

The standard deviation 2.063 for age limit for participation in savings and credit and 2.184 for whether savings and credit are as source of capital are larger than their means which are 1.94 and 1.5 respectively. These results indicate that age may not be a limiting factor for one to participate in savings activities and that indeed savings are a source of capital for the youth to take part in the aquaculture enterprises. Savings and credit activities are particularly popular amongst these rural youth as seen by the means of 1.17 and standard deviation on 0.376 for the participation of youth in savings and credit and 1.34 and standard deviation on 0.477 which show a small variation in response, therefore indicating that age is not a hindrance on accessing credit. This shows that if well trained in savings and credit more youth are able to participate and create wealth which can be used for investment in small businesses.

The findings show that the youth have been able to borrow loans both in cash and kind as seen by the mean of 1.67 and standard deviation of 1.069. This shows that given a youth are

dynamic in borrowing as they can wish to access either cash or loan in kind to kick start their businesses. This is supported by the study done by Rwandan Government (2011) on youth and women access to finance programs which revealed that women and youth are significantly underserved in the finance sector. It showed that underemployed youth have restricted access to finance and consequently cannot invest in productive enterprises. Another study that supports the saving and credit initiative for the youth is on integrated approach to empower youth on microfinance project (YMF) which demonstrated success through the involvement of youth in youth savings groups (YSGs) and delivered financial education. This enabled the youth to make informed decisions about how they manage their financial and non-financial assets by enhancing their economic self-reliance and contribute to the household well-being.

The study also sought to establish if the aquaculture enterprises being promoted by the Farm Africa project which sought to promote employment amongst the youth. The information provided by the respondents was mainly to seek their views to remain in aquaculture production as an employment opportunity or otherwise seek white collar jobs. Table 17 provides the following findings;

**Table 18 Self-employment**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	work with own terms and conditions	2	2.0	2.1	2.1
	Earning one living from one's profession	4	4.0	4.2	6.3
	Earning income through profitable business operations operated directly	34	33.7	35.4	41.7
	Individual working for himself rather than for an employer	56	55.4	58.3	100.0
	Total	96	95.0	100.0	
Missing	System	5	5.0		
Total		101	100.0		

*Source: Field data, 2020.*

The findings show that the respondents 58.3% of the respondents understand self-employment as an individual working for himself rather than for an employer, while 35.4%

thought that it is earning income through profitable business and others though that it was earning ones living from one’s profession or work with own terms and conditions at 4.2% and 2% respectively. This indicates that they have a basic understanding of the difference of being employed and self-employed. This understanding helps them to be self-reliance as the business solely depends on their own initiatives and efforts to make it grow. It was also important to know if the youth acknowledged that aquaculture could be a form of employment for them. This is shown in table 18.

**Table 19 Creation of Employment**

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Can aquaculture enterprise provide self-employment	100	1.02	.141
Feel aquaculture has provided employment for you	99	1.14	1.020
Would you leave aquaculture for a white-collar job	99	1.82	.388
Valid N	99		

*Source: Field data, 2020.*

The findings show that the respondents appreciate the fact that aquaculture enterprises provide an opportunity for self-employment. This is seen from the means of 1.02 on aquaculture providing self-employment, 1.14 on the feeling that aquaculture has provided self-employment and 1.82 on leaving aquaculture enterprises for white collar job. These have their standard deviations as 0.141, 1.020 and 0.388 respectively. The main reason why the respondents support aquaculture as a self-employment entity is because it provides daily income and some sense of independence in business.

These findings are supported by a development project that was supported by UNDP (2012) called youth employment and empowerment program. Their module on youth employment concentrated on supporting the youth changeover from school to work by availing services on employment promotion like internships and assistance to small, medium sized and micro business development. Following the establishment and expansion of new businesses, 204 jobs created. In essence, youth adopt faster once they are given direction on employment opportunities and are trained on how to get incomes form those employments.

## 4.6 Inferential statistics

Regression analysis was used to get an equation which defines the degree to which the variation in the dependent variable is described by the independent variable. Regression analysis is a suitable tool to examine the strength of the relationship between one dependent variable (Y) against a changing variable (independent variable). The study used a regression model to establish the impact of youth empowerment on the livelihoods of the rural youth based on the mean and standard deviations of the study variables.

### 4.6.1 Tests of regression assumptions

#### 4.6.1.1 Normality test

The study used the Shapiro-wilk tests for normality to examine the variables. At 95% confidence interval level, the null hypothesis is that the data are normally distributed. These were together derived from SPSS calculations on the dependent variable which is livelihoods that is based on the food security, health and housing.

**Table 20 Normality tests**

**Tests of Normality<sup>a</sup>**

	Kolmogorov-Smirnov <sup>b</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Financial literacy trainings	0.348	49	0	0.641	49	0
Provision of start-up capital	0.386	77	0	0.596	77	0
Market linkage	0.483	91	0	0.417	91	0
Aquaculture empowerment	0.404	75.3		0.555	75.3	0
b. Lilliefors Significance Correction						

*Source: Field data, 2020.*

The findings showed the p value to be  $<0.05$  meaning that the data is not normally distributed across the dependent variables thus there is no significant relationship between them. To solve the normality problem, the study applied a logarithmic transformation on the Dependent variables as shown in table 4.22 so as to make the data approximately normally distributed.

**Table 21 logarithmic transformation for Normality test**

**Tests of Normality<sup>a</sup>**

	Kolmogorov-Smirnov <sup>b</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Financial literacy trainings	0.318	49	0	0.735	49	0
Provision of start-up capital	0.358	86	0	0.637	86	0
Market linkage	0.467	91	0	0.419	91	0
Aquaculture empowerment	0.443	86	0	0.463	86	0
b. Lilliefors Significance Correction						

*Source: Field data, 2020.*

After subjecting the normality test to logarithmic transformation, the results still showed skewed distribution. Therefore, the data was then subjected to nonparametric test (Friedman’s test) which allows the comparison of more than two dependent groups as shown on table 21.

**Table 22 Friedman’s test**

**Ranks**

	Mean Rank
Financial literacy	4
Provision of start-up capital	5.5
Market linkage	3.5
Aquaculture empowerment	5.5
Overall Median	4.6

*Source: Field data, 2020.*

**Test Statistics<sup>a</sup>**

	N	Chi-Square	df	Asymp. Sig.
Financial literacy	95	150.127	3	0
Provision of start-up capital	77	66.096	15	0
Market linkage	91	311.51	5	0
Aquaculture empowerment	68	315	8	0
a. Friedman Test				

*Source: Field data, 2020.*

From table 4.23 above, the results showed that the provision of start-up capital and aquaculture empowerment ranked first at 5.50 and the mean is much closer to the overall

mean (4.60), while the financial literacy and market linkage variables are close together (i.e. 4.00 and 3.50 respectively). This is in line with Josanthony (2014) who argued that food is an essential human requirement/ need. The right to food is important and lack of it lots of various human rights cannot be experienced. Nevertheless, the availability and accessibility of food in the desired and quality quantity all through a given year remains a dream for many people around the world.

The Friedman’s test showed significant relationship between the dependent variables where  $X^2(2, N=95)=150.127, p<.001$ ,  $X^2(2, N=77)=661.096, p<.001$ ,  $X^2(2, N=91)=311.51, p<.001$ ,  $X^2(2, N=86)=315, p<.001$ , for financial literacy, provision of start-up capital, market linkage, and aquaculture empowerment respectively. These results were in line with the results of Hazzelip (2012) who observe that in these areas, there were many issues affecting the food security situation and that the recognition of this was growing. These include socio-economic factors such as, poor agricultural practices, low levels of household incomes and expenditure patterns, and marketing practices.

#### 4.6.1.2 Homogeneity of Variance

The homogeneity test was tested using the Levenes’s test which is used to assess the equality of variances for a variable calculated for two or more groups. This was to test if the k samples have equal variances. Therefore, if the assumptions are met, the distribution follows the F distribution with degrees of freedom g-1 and N-g

**Table 23 Homogeneity of variance**

**Test of Homogeneity of Variances**

	Levene Statistics	df1	Df2	Sig.
Financial literacy	3.278	3	79	0.303
Provision of start-up capital	3.456	3	91	0.216
Market linkage	5.625	3	90	0.011
Aquaculture empowerment	2.977	3	88	0.246

**Source: Field data, 2020.**

The findings showed that at 95% significant levels, the significance of the independent variables were 0.303, 0.216, 0.011 and 0.246 whose p-values  $>0.05$  showing that the variances were homogenous. The significant value of 0.303 on financial literacy trainings showed that there was enough evidence showing that the variances were homogenous. The results

indicated that they had gained benefits from financial trainings. This indicated that proper planning of the incomes enabled the farmers to take care of their basic needs such as getting enough food which most likely had resulted in good health hence reduced visits to the health centers. These findings were supported by the Farm Africa YES report, 2015 which showed that financial literacy trainings aimed at equipping the young farmers with established knowledge and skills that allowed them to make effective and informed decisions regarding money matters. These trainings enabled the farmers to understand the importance keeping records, budgeting and planning, saving and credit/ loaning.

The results also showed a 0.216 significant value for provision of start-up capital which showed that when the young farmers were facilitated with start-up capital they were able to initiate the aquaculture enterprises which enabled them to know their costs of production and profits and the first thing that tend to improve was access to food and other basic requirements which made them live comfortably.

Food accessibility is one of the key basic need requirements amongst the human beings. The rural growers were capable of getting money through their aquaculture enterprises. This will be enabled them to afford food for more months within the year (Farm Africa YESA report, 2015). Since food is an essential basic need, these results are supported by the theory of Hierarchy of needs by Maslow which states that each need must be satisfied in turn, starting first with the most obvious needs for survival itself (Maslow, 1970). It is only when the youth have fulfilled their basic needs on shelter, food and education, than they move to other higher needs which include social interaction and other community activities (AU, 2010).

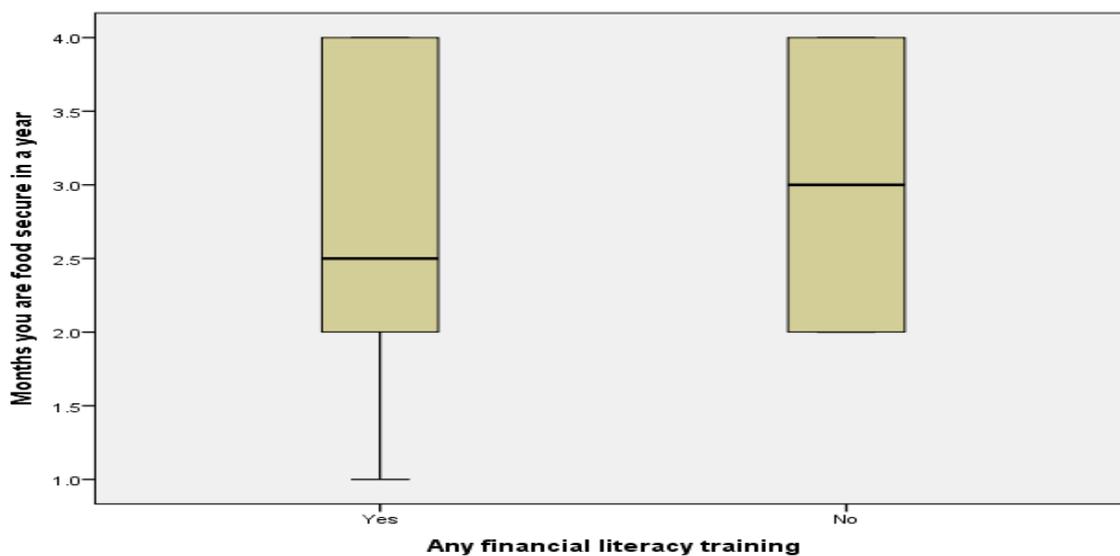
These results also indicate that at 0.246 significant levels on aquaculture empowerment, the farmers engaged on fish production and felt that the aquaculture enterprises provided employment for them. These results were supported by the fact that in Kenya, the small-scale farmers provide 2% of the total 4% produce on the aquacultural exports (Ministry of Agriculture, 2012) compared to 90% the total aquacultural production utilized in the domestic market. Since the majority contributors to this sector are the small holders, it is prudent to ensure fish productivity improvement while aiming at reducing the cost of production through maximum utilization of area under production to increase revenue (Minot and Ngigi, 2002).

Therefore, aquaculture is seen to provide more economic opportunities for the smallholder farmers and at the same time, due to the sector’s openings it proffers to small-scale commercialize farms and the high labour requirements, the developing market for aquacultural produce has been envisaged as a strategy for pro-poor in poverty alleviation amongst the rural people (Ministry of Agriculture, 2012).

#### 4.6.1.3 Test for outliers

Outliers are data points that appear to be significantly different than the majority of the data points. This study sought to establish if there were any outliers by testing for outliers using the interquartile range rule on all the study’s objectives. This provides box plots which contain several statistical measures that explore the data and provide a visual of how the data is distributed.

**Figure 6 Outliers showing financial literacy**



Source: Field data, 2020.

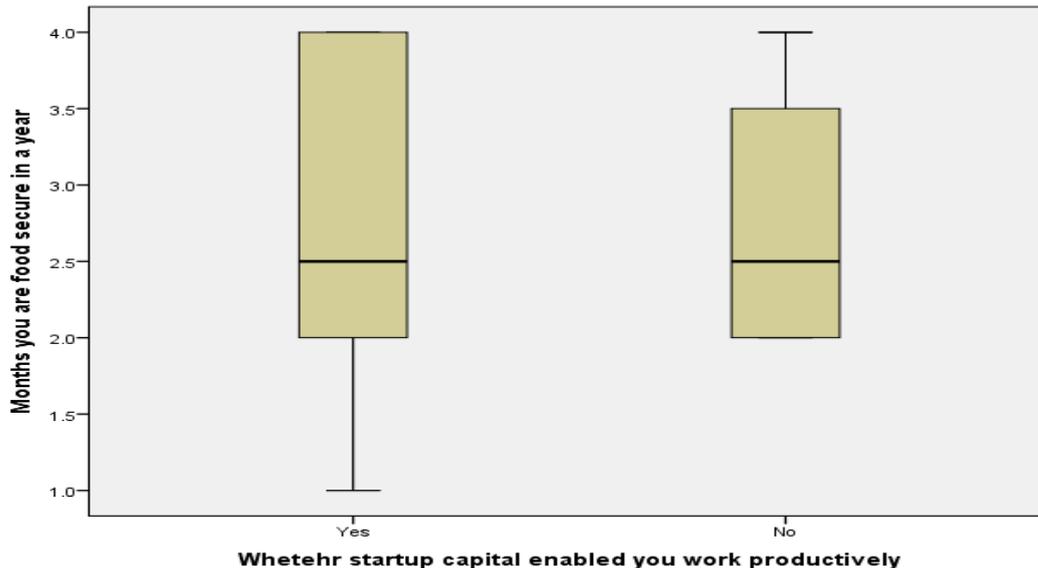
The findings do not show any evidence of outliers for financial literacy trainings. The results show that the median on the yes response is on the lower quartile which means that many of the responses were greater than the median while on the no response; the median is in the middle thus indicating that there were equal responses to the median. The median for the yes response is on the 25% quartiles while that of the no response is on the 30% quartile. This means that the responses on the no had a higher median that those on the yes response. The boxes response on yes has its lower whisker at 10% while the box on neither has a lower or

upper whisker. This indicates that the yes responses are greater in number than the no responses.

These results indicate that the respondents agreed that they received financial trainings and also agreed that they had more months of the year to which they were food secure. These findings are supported by the Farm Africa YES report, 2015 which showed that financial literacy trainings equipped the young farmers with a combination of knowledge and skills that allowed them to make effective and informed decisions regarding money matters. These trainings enabled the farmers to understand the importance of keeping records, budgeting and planning, saving and credit/ loaning, thus they were able to plan wisely in fish production and the income received they were able to access food more months in the year. This indicates that proper planning of the incomes enabled the farmers to take care of their basic needs such as getting enough food which most likely has resulted in good health hence reduced visits to the health centers.

Test for outliers was also done for provision of start-up capital as shown in figure 7.

**Figure 7 Outliers for provision of start-up capital**



Source: Field data, 2020.

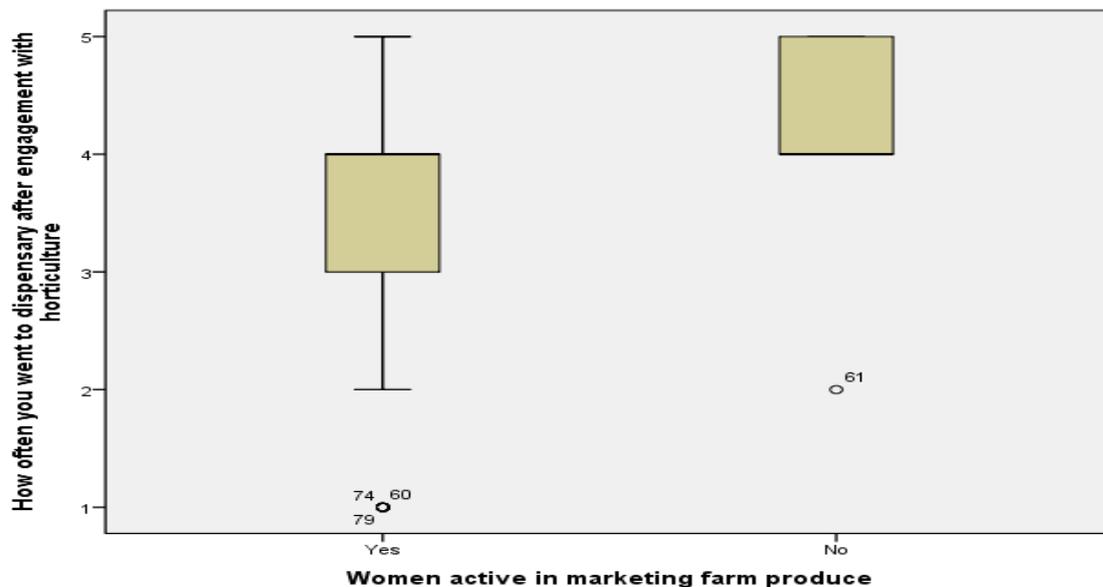
The findings do not show any evidence of outliers. The results show that the medians on both the yes and no response are on the same quartile at 25%, though there is an extended box on the yes response up to 40% which shows that there were more responses more than the median compared to the no responses. The yes response box has its lower whisker at 10%

which is longer than the upper whisker on the no response which indicates that the responses on the yes were more than those on the no response. The results indicate that the respondents were in agreement that the provision of the start-up capital was helpful in starting up their aquaculture enterprises and that the income helped in accessing food for more months in the year. Access to capital is one great challenge for young farmers/ entrepreneurs as most financial institutions do not have favorable packages for them and also at this young age, the youth do not have collateral to secure any loans. From the Farm Africa, YESA report, 2015, it showed that provision of start-up capital to the youth enhanced their ability to engage in aquacultural business have generated income for their own upkeep.

These results are supported by the study done by Rwandan Government (2011) on financial accessibility programs to youth and women which revealed that women and youth are significantly underserved in the finance sector. It showed that underemployed youth have restricted financial access and thus are unable to invest in productive businesses. Therefore, assisting the young farmers to access capital in kind and also engaging them in savings and credit activities amongst themselves enabled them to make informed decisions about how they manage their financial and non-financial assets by enhancing their economic self-reliance and contribute to the household well-being.

Test for outliers was also done for market linkages as shown in figure 7.

**Figure 8 Outlier for Market linkages**



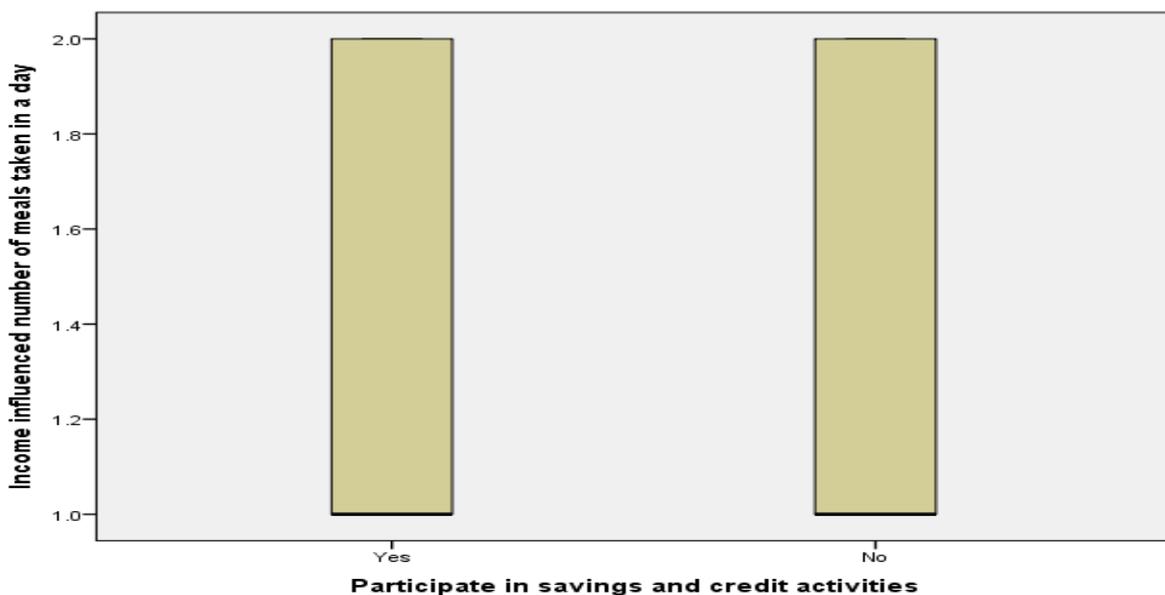
Source: Field data, 2020.

The results show that there are four outliers in the lower quartile at both level one on the yes response and level 2 on the no response. The medians are at the same level of 4% with the yes response having most of the responses on the lower side of the median meaning that the responses were lower than the median while those of the no response were higher than the median. The yes box has both the upper and lower whiskers at 5% and 2% respectively. This shows that there were more responses on the yes response than on the no response.

These results indicate that the respondents allow women to engage in productive marketing activities. For sustainability in food security and welfare, market-oriented agricultural production is considered a viable option which has been promoted by policy makers with the expectation that it can raise household income and at the same time increase productivity of fish due to increased input use (Pingali, 1997). This marketing component is also supported by Khaoya and Makori (2016) research findings where they emphasized on the need of exposing the rural youth to marketing networks for their products. It was concluded that marketing played a great role in ensuring income generation hence it is the greatest challenge especially after the youth’s had been provided with loan as working capital from YEDF and fail to sell their produce leading to loan defaults and youth financial frustrations.

Test for outliers was also done for aquaculture empowerment activities which include savings and credit activities as shown in figure 9 and creation of employment as shown on figure 8.

**Figure 9 Outliers for savings and credit**

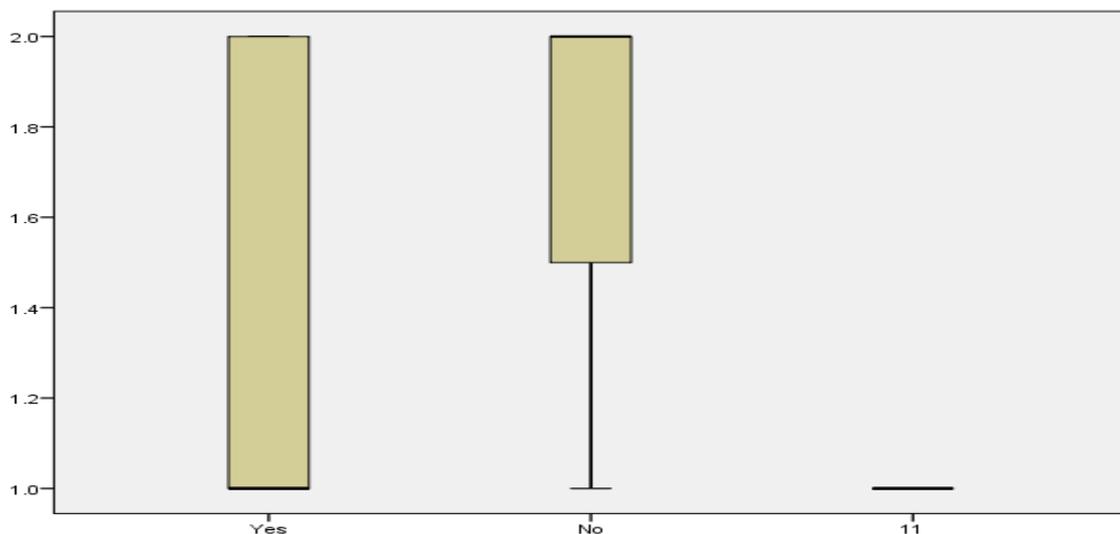


Source: Field data, 2020.

The findings show that there are no outliers therefore the results show that two responses have their median at the same level of 10%. All the responses are above the medians indicating that the numbers were larger than the median. The response boxes are the same length i.e. the highest level is at 20% indicating that the respondent have equal opinion on the variables thus could not agree on the if their involvement in credit and savings influenced the number of meals taken in a day. The results indicate that savings and credit activities were not directly linked to the food accessibility.

However, a study on youth on microfinance Project (YMF) demonstrated success through an integrated youth economic empowerment program that promoted youth savings groups (YSGs) and delivered financial education, life skills, and entrepreneurship training to nearly 90,000 youth (age 15-24) in Niger, Senegal, and Sierra Leone from 2009 to 2014. YMF demonstrated that when provided with appropriate financial instruments and training, Women and youth can make informed choices about how they manage their financial and non-financial assets by enhancing their economic self-reliance and contribute to household well-being through increased investments in nutrition, education, and health. This study was done to effectively comprehend the way savings groups for the youth can have a say in the fight against youth unemployment, through alleviating the challenges to entrepreneurship.

**Figure 10 Outlier for create employment.**



*Source: Field data, 2020.*

The findings show that here are no outliers; therefore, the results show that the yes response has its median at the lower level of the quartile at 10% while the no response has its median

at the upper level of the quartiles at 20%. This shows that the yes responses had their numbers larger than the median while the no responses had their numbers smaller than the median. This indicated that the respondents agreed that they felt aquaculture provided self-employment for them.

This shows that engaging the youth in fish production activities provided a platform for employment which can generate income to aid in the day to day living. These results are supported by a report based on a project called Youth Employment and Empowerment Program (YEPP), which was started in 2011; which built on UNDP’s extensive post-war experience while assisting the empowerment youths in Sierra Leone. The project resulted to around 359 businesses expanded and saw 108 amongst the expanded businesses being registered with government business registration authorities. Two hundred and four new jobs were created as a result of the establishment and expansion of the new enterprises. Two hundred youth-led enterprises were also helped to grow their businesses through entrepreneurship trainings and business management skills guided by advisor and technical coaches. Fifty percent amongst the Four hundred youth were women, who were assisted through extension services, supply of inputs training, and to start their own agri-businesses (UNDP, Sierra Leone 2012).

#### 4.7 Test of hypotheses

##### 4.7.1 Co-efficient of Determination

The study sought to establish the goodness of fit by summarizing the discrepancy between the observed values and the values expected under the regression model. To test the regression model, R-squared (Co-efficient of determination) was used which is the proportion of the variance in the dependent variable that is predictable from the independent variable. Therefore, the study used the R<sup>2</sup> between 0 and 1 to indicate the extent to which the dependent variable is predictable.

**Table 24 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.514	0.279	0.166	0.696	1.624
a. Predictors: (Constant), Financial literacy, Provision of start-up capital, Market Linkage, aquaculture empowerment					
b. Dependent Variable: Livelihood (food, housing and health)					

Source: Field data, 2020.

For this project, an R-squared of 0.279, was obtained indicating that the data is not close to the fitted regression line at  $p \leq 0.001$ . This is because the  $R^2$  is closer to zero than 1. However, the predictor values (financial literacy training, provision of start-up capital, market linkage, and aquaculture empowerment) are directly associated with the observed value (food security, health and housing). This shows that there is a 27.9%, of variation in the observed values that is explained by the predictor values respectively. These results indicate that the observed values on food security, health and housing are slightly influenced by the predictor values of financial literacy trainings, provision of start-up capital, market linkage, and aquaculture empowerment. Perhaps, indicating that the youth had not fully optimized their engagement in the aquacultural enterprises and needed more time to stabilize these businesses to experience the full impact on food security.

#### 4.7.2 Analysis of Variance (ANOVA)

**Table 25 Summary of One-Way ANOVA**

#### ANOVA<sup>a</sup>

Model	Sum of Squares	df	Mean Square	F	Sg.
Regression	13.7292	9.6	1.385	2.455	.0926 <sup>b</sup>
1 Residual	48.5326	65.4	0.753	0	
Total	62.2618	75	0	0	
a. Predictors: (Constant), Financial literacy, Provision of start-up capital, Market Linkage, aquaculture empowerment					
b. Dependent Variable: Livelihood (Food, housing, health)					

*Source: Field data, 2020.*

Results revealed that the main effect of the dependent variables (food security, health and housing) were  $F(9.6,65.4) = 1.385$ ,  $p \geq 0.05$ . It is obvious from the above that financial literacy trainings provided, provision of start-up capital, market linkages and aquaculture empowerment were significant at 5% level of significance ( $F=2.455$ ;  $P=0.0926$ ) thus contributing to the youth's improvement on food security, health and housing. The results further show that the predictor values (financial literacy trainings, provision of start-up capital, market linkages and aquaculture empowerment) are assumed to have provided avenues to acquired more income or retain income from the youths' aquacultural activities hence enabling the youth to improve their livelihoods through proper utilization of money hence leading to some income being invested in housing, health and food security. The

provision of financial literacy trainings is in line with the findings of King and McGrath (2012) who observe that training is essential in ensuring the farmers are equipped with the knowledge of keeping the record for every transaction they make and hence be in a position to account for what they have put into taken out of the enterprise.

### 4.7.3 Multiple regression analysis

The study further determined the beta coefficients of financial literacy, provision of start-up capital, market linkage and aquaculture empowerment verses the dependent variables on livelihoods (Health, food security and housing). The findings are presented in Table 26.

**Table 26 Multiple regression analysis**

#### Beta Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	0.818	1.067	0	0.819	0.453
1	Financial Literacy	0.27	0.312	0.129	0.807	0.379
2	Provision of start-up capital	0.016	0.155	0.039	0.314	0.325
3	Market Linkage	0.101	0.096	0.105	1.008	0.387
4	Aquaculture Empowerment	0.205	0.558	0.054	0.393	0.44

a. Dependent Variable: Livelihood (Health, Housing, Food security)

Source: Field data, 2020.

The model can be represented as:

Livelihood = 0.818 +0.270 financial literacy + 0.016 Provision of start-up capital + 0.101 market linkage + 0.205 aquaculture empowerment

The study shows that  $\beta_1 = 0.270$  (p-value = 0.379 which is more than  $\alpha = 0.05$ ). This suggests that we fail to reject the null hypothesis that there is no significant relationship between financial literacy and livelihood. The results mean that each unit increase in the positive effect of financial literacy, there is a 0.270 unit increase in the livelihood. These findings concur with the findings by Lusimbo (2011) that there has been no growth for businesses

whose managers have low financial literacy. The recommendations from this study show that financial literacy training programs should be organized for MSEs across the county, incorporating financial education in the school curriculum from Primary level so that individuals are financially informed early in life. Other findings indicated that the main aim of including financial activities is to draw the “unbanked” population into a financial system that is formal, to enhance their skills to acquire financial facilities varying from payments, savings and transfers to insurance and credit (Hannig and Jansen, 2010).

The study also shows that  $\beta_2 = 0.061$  (p-value = 0.325 which is more than  $\alpha = 0.05$ ) which indicates that we fail to reject the null hypothesis stating that there is no significant relationship between provision of start-up capital and livelihood. This indicates that for each unit increase in the positive effect of top management commitment, there is 0.061 units increase in livelihood. The study is supported by Eija Soini's (2005) report whose findings show that the financial capital is the most crucial amongst other various types of capital. The rising requirements of cash for health care school fees, and farm inputs, added to the decrease farm produce is forcing growers to look for off-farm jobs.

The value of  $\beta_3 = 0.101$  (p-value = 0.387 which is more than  $\alpha = 0.05$ ) which implies that we fail to reject the null hypothesis stating that there is no significant relationship between market linkage and livelihood. This indicates that for each unit increase in market linkage, there is up to 0.101 units increase in livelihood.

These findings are in consistent with Dorward, Poole, Jammie and Kydd (2003) who found that there is a significance of the private sector and markets for pro-poor poverty reduction and well-being development. The report deduces that the poor peoples' well-being is directly dependent on their participation in a variety of markets as private agents, employees or suppliers and the poor themselves recognize the challenges with markets as significant to their well-being.

The value of  $\beta_4 = 0.205$  (p-value = 0.444 which is greater than  $\alpha = 0.05$ ) which implies that we fail to reject the null hypothesis stating that there is no significant relationship between Aquaculture empowerment and livelihood. This indicates that for each unit increase in aquaculture empowerment, there is up to 0.205 units increase in livelihood which is very negligible.

The research on the Inland Niger Delta region of Mali showed that fish producers and livestock boosted diversification of their well-being systems to distribute risk on generation of income from their farms, but this diversification is fetching less and less effectiveness in providing producers with their needs (Davies 1996a:284). Conferring to Davies, every family selects an intricate mix of activities corresponding to a variety of well-being criteria in the bigger context of more dependence on the market, and of a current recognized negative cycle of adaptation and subsistence.

In general, the results of the study from the inferential statistics showed that youth empowerment had a positive effect on the youth's livelihoods. The finding is supported by Mautos (2013) whose study showed that livelihood projects that are youth-led improved youth access to physical, social, human, natural and financial assets to a limited extent. The reports emphasized that dedicated, innovative and enthusiastic youth business persons worked together to incapacitate impediments that led to the formation of youth-led microenterprises which brought the youth together.

## **CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter provides a summary of the findings of the study, discussion of the results, conclusions, and recommendations. It also outlines proposed areas of future research.

### **5.2 Summary of Findings**

#### **5.2.1 Financial Literacy Training and livelihoods**

The results of this research showed that the financial literacy trainings were significant at 5% level of significance as it contributed to the youths' empowerment in engaging in aquacultural activities. The respondents agreed that they all received some financial literacy training. The respondents found the trainings to be useful at different levels. The study also revealed that respondents also had a small variation in their responses to how they felt that their level of education did not hinder their level of understanding the financial literacy trainings. Majority of the respondents also thought that education level indeed hindered understanding of the financial literacy training offered to a very huge level. This is because the results indicated that there was no consistency in record keeping with most farmers thus showing that the trainings may not have had a major effect on improving the record keeping.

#### **5.2.2 Provision of start-up capital and livelihoods**

The study findings showed that the provision of start-up capital was significant at 5% level of significance as it provided an avenue for the rural youths to start off their business and made incomes that enabled them to stay in the aquaculture activities. The effect of the start-up capital was positive as the interaction of the respondents with Farm Africa's YES project was generally good and very good as shown by the majority of the respondents. The findings on how most of the aquaculture enterprises were started showed that the respondents received assistance from Farm Africa to start their aquaculture enterprises with only few respondents who used their own savings to start up the enterprises, the rest were on own initiative, those who borrowed loans and were assisted by parents and others were assisted by experienced farmers. The findings also showed that aquaculture production is a good business.

#### **5.2.3 Market Linkages and livelihoods**

These study findings showed that market linkages were significant at 5% level of significance as it enabled the farmers to access the markets for their different products and sold them to

gain some income. This had a positive impact in that most respondents got involved with the current markets they supply through a linkage by an organization. It was established that the respondents interacted with the market through information from other farmers and personal market search. The study findings show a small variation in response indicating that women participate in marketing of farm produce and also the respondents agree that women are allowed by men to actively participate in marketing activities within their societies.

#### **5.2.4 Aquaculture Empowerment and livelihoods**

The findings from this study showed that the aquaculture empowerment on ensuring that the farmers were trained on savings and credit and realization that aquaculture enterprises can create employment was quite significant at 5% level of significance. The aquaculture empowerment had a positive impact on the rural youth as the savings and credit activities were particularly popular amongst these rural youth as indicated by majority of the respondents. This showed that if well trained in savings and credit more youth would be able to participate and create wealth which could be used for investment in small businesses. It was also established that the youth were able to borrow loans. This showed that youth are dynamic in borrowing as they can wish to access either cash or loan in kind to kick start their businesses.

The findings of this study show that the aquaculture enterprises were a preferred mode of employment to the rural youth as they felt that it provided them with direct incomes which took care of the daily needs. These enterprises also provided them with a sense of business independence thus enabling them to exercise self-supervision and make independent decisions. This showed that when the youth are given a chance to run an enterprise in the presence of knowledge provision, they are able to adopt and expand their business and the reliance on white collar jobs is reduced.

### **5.3 Conclusions**

From the findings, the research concludes that the youth empowerment positively influenced the rural youth's livelihoods. On financial literacy training, the study concludes that financial literacy training programs for the youths contributed heavily to the establishment of sustainable aquacultural production enterprises in Kasempa. However, these trainings did not have a positive impact as the farmers had a challenge in keeping proper records to which they could gauge their businesses with. It was noted that the education level was one of the key

issues that contributed to the slow rate of uptake of any trainings on business skills and entrepreneurship thus bringing out that gap on record keeping. These trainings on financial literacy were intended to equip the youths with knowledge and skills to manage their business successfully, and make sound financial decisions.

On startup capital the study concludes that youths were facing challenges in accessing credit from financial institutions and initiatives such as those undertaken by Farm Africa YES project in providing support on start-up capital enabled them to start business. It was also seen that the youths could likely grow dependent of the programs, thus a need to ensure that they got used to financing their own businesses with time through the project for sustainability in growth. On marketing linkages, the study concluded that women were found to be active in marketing of the produce and organizations such as Farm Africa helped link most of the youths to their current markets. On aquacultural empowerment, this study concluded that the introduction of savings and credit activities enabled most respondents to participate as this was attributed to the widespread awareness programs which were initiated by Farm Africa YES project as well as National Government initiatives such as Youth empowerment programs. The aquacultural empowerment also provided an employment opportunity for the youth to which they were able to produce aquacultural products thus accomplishing the need to increase incomes leading to improved economic status as well as having a high nutritive base of fish products that helped in improving their health.

#### **5.4 Recommendations of the Study**

On financial literacy training, the study recommends that financial literacy is a vital training that should be conducted to help entrepreneurs save enough to provide adequate capital to invest in their businesses. Financial literacy training should be based on income and education levels because highly educated consumers with high incomes can be just as ignorant about financial issues as less educated, lower income consumers. People should be asked to choose among various investment and savings products because the financial landscape is very dynamic. The Government, through youth empowerment programs should continuously offer training to youths especially those with no technical skills, on new production and marketing strategies/ techniques that aim at increasing quality and quantity of harvest to achieve lasting impacts.

On startup capital, this study recommends that public partnerships should be fostered between the government, development partners, non-governmental organizations, financial institutions and other relevant financial institutions to ensure that people can access capital towards investing in aquaculture production as well as entrepreneurship in Kasempa.

On market linkages, this study recommends the inspiring of formation of growers' or an assembly market through the promotion of new market by supporting improved planning in the local towns. The study also recommends assisting the start of new trading relationships that help to arbitrate in the event of breakdowns in communication and disputes. Good relationships should be established to better the knowledge of growers about their markets and how they can benefit additional profitable and more commercially oriented by increasing market demand through the production of market preferred fish. Information should be provided in advance, like traders' business terms, probable array of prices and other companies worth contacting etc. On aquaculture empowerment, this study recommends that industrialization should be boosted to create more opportunities and employment to the ever-rising number of unemployed youths in the country since aquaculture farming is not a holistic panacea to lack of employment among the youths and not every youth is interested in aquaculture farming.

In general, the study recommends that youth livelihood development must be supported by the willingness to share knowledge and collectively work together so that to expand outreach to the youth growing populations enabling a collective environment that will maximize the impact of the surge of youth entering the workforce hence curbing the unemployment menace.

### **5.5 Suggestions for Further Study**

This study recommends that further studies should be conducted specifically to improve the delivery of financial literacy trainings, more so on record keeping which proved to be a difficult subject to train on. Another area of study is on the influence of market opportunities or technical assistance on the performance of aquaculture enterprise among youths in Kasempa. Further research should be conducted in another region for the purposes of comparison in engagement of rural youth in aquaculture activities to know whether this is a venture that will help the Country create employment for the youth through the aquaculture sector. This will enable understanding of how empowerment influences youth, groups, or

whole community with intersections like sexuality, gender, race, culture, class and language among other inequalities. Market linkage is an important factor for building business enterprises; hence more collaboration with private sector would boost entrepreneurship in farming. This can therefore be enhanced through further research on both productivity and market demand that leads to promotion on market led commercial production for the rural youth.

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**APPENDICES**

**Appendix I: Letter of Transmittal**

Derrick Chilefwe

P.O. Box 120059,

Kasempa UCZ, Kasempa.

May, 2020

The .....

.....

Dear Sir/Madam,

**RE: ACADEMIC RESEARCH**

I am a student at University of Zambia currently pursuing a Master’s Degree in Business Administration. As part of the course requirement, I have to undertake a research project. To this effect therefore, I am conducting a research on the effects of empowerment on livelihood based on a case study of rural youth engaged in Aquaculture enterprises in Kasempa. In addition to this, the information generated will be useful for improving agricultural activities in the area. The information generated will therefore be for public good. However, where confidentiality is required, this will be maintained.

To assist in the realization of the above, I am kindly requesting for your assistance in responding honestly to this questionnaire. .

Looking forward to your corporation.

Yours faithfully,

Chilefwe Derrick

Computer Number: 716814471

## Appendix II: Questionnaire

### 1. Business Identification

This section is to be completed for each farmer visited

1. Ward Name \_\_\_\_\_
2. Sub –Location Name \_\_\_\_\_
3. Group Name \_\_\_\_\_

### 2. Demographic Information (Please tick where appropriate)

1. Gender Male Female

2. Age  Below 18 Years 3. Marital status  Married

- |                                      |                                   |
|--------------------------------------|-----------------------------------|
| <input type="checkbox"/> 18-24 Years | <input type="checkbox"/> Single   |
| <input type="checkbox"/> 25-30 Years | <input type="checkbox"/> Divorced |
| <input type="checkbox"/> 31-35 Years | <input type="checkbox"/> Widowed  |

4. What is your highest education level?

O level  A Primary School  Secondary school  Tertiary college  Not schooled

5. What Aquacultural fish are you mostly involved in production? (Please tick where appropriate)

- A. Domestic consumption
- B. Export
- C. None of the above

6. In the last two seasons, how many cycles of Aquaculture production have you done? (Please tick in the box provided)

- 1 cycle  2.cycles  3.3cycles  4.Above 3cycles

7. What are your plans for farming production for the next five years? (Please tick in the box provided)

1. Continue with the fish production in the same size
2. Increase the fish production slightly

- 3. Increase the fish production significantly [ ]
- 4. Leave the fish production and get employed [ ]
- 5. Sell the land [ ]

8. What is the legal ownership status of the land under cultivation? (Please tick appropriately in the box provided)

- A. Sole ownership [ ] B. Community land [ ] C. Joint ownership [ ] D. Leased land [ ]
- E. Family land [ ] F. Inherited [ ]

9. Why did you prefer to start your own fish production? (Please tick appropriately in the box provided)

- A. Family tradition [ ] D. Small investment is required [ ]
- B. To be self-employed [ ] E. No other alternative for incomes [ ]
- C. Brings high income [ ] F. Others (Specify) -----

### 3. Financial literacy

1. What is the level of farm incomes generated from the Aquaculture activities? (Please tick appropriately in the box provided)

- 1. Excellent [ ] 2. Good [ ] 3. Fair [ ] 4. Poor [ ]

2. How much do you earn per week form the Aquaculture enterprises? (Please tick appropriately in the box provided)

- 1. ZMW 200- 1000 [ ] 2. ZMW 1000- 2000 [ ]
- 3. ZMW 2000- 5000 [ ] 4. ZMW 5000 and above [ ]

3. How has your experience ben on keeping your financial records? (Please tick appropriately in the box provided)

- 1. Excellent [ ] 2. Good [ ] 3. Fair [ ] 4. Poor [ ]

4. Please give two challenges you have experienced in handling financial records \_\_\_\_\_

5. Have you been trained on financial literacy? (Please tick appropriately in the box provided)

- 1. Yes 2. No

6. Were the trainings on financial literacy useful to you? (Please tick appropriately in the box provided)

1. Very Useful [ ] 2. Useful [ ] 3. Average [ ] 4. Not useful [ ]

7. To what extent has the level of education hindered your understanding towards the trainings. (Please tick appropriately in the box provided)

Very Great Extent [ ] Great Extent [ ] Undecided [ ] Small Extent [ ] Very Small Extent [ ]

8. What other benefits have these trainings added to you and your group? [Read out options to the interviewee]

a. Understand how to do business and know how to check for profits and losses [ ]

b. To plan for my farming activities [ ]

c. To plan for my other needs and ensure reinvestment to continue the business [ ]

d. It is too much to plan, I just use it as needs arise [ ]

#### **4. Provision of start-up capital**

1. How do you rate Aquaculture enterprise farming as a good business? (Please tick appropriately in the box provided)

1. Excellent [ ] 2. Good [ ] 3. Fair [ ] 4. Poor [ ]

2. How did you start your Aquaculture enterprise? (Please tick appropriately in the box provided)

a. Borrowed loan [ ] b. Used my savings [ ]

c. Through the assistance of Farm Africa [ ] d. Assistance from my parents [ ]

e. Assistance from experienced farmers [ ] f. Own initiative [ ]

3. How was your interaction with farm Africa activities?

1. Excellent [ ] 2. Good [ ] 3. Fair [ ] 4. Poor [ ]

4. How helpful was YESA's project support in providing start-up capital? (Please tick appropriately in the box provided)

1. Excellent [ ] 2. Good [ ] 3. Fair [ ] 4. Poor [ ]

5. Do you think this kind of support should always be provided to you?

1. Yes 2. No 3. Sometimes

6. How would you rate YESA's project Support? (Please tick appropriately in the box provided)

1. Excellent [ ] 2. Good [ ] 3. Fair [ ] 4. Poor [ ]

7. How effective was the start-up capital on your work? (Please tick appropriately in the box provided)

1. Excellent [ ] 2. Good [ ] 3. Fair [ ] 4. Poor [ ]

8. Has your monthly income increased since you started the Aquaculture enterprises?

1. Yes [ ] 2. No [ ]

9. At what range was your income per month before YESA's project intervention? (Please tick appropriately in the box provided)

1. ZMW 0-1000 [ ] 2. ZMW 1000-4000 [ ]

3. ZMW 4000-10000 [ ] 4. More than ZMW 10000 [ ]

10. What is the range of income per month after YESA's project intervention? (Please tick appropriately in the box provided)

1. ZMW 500-2000 [ ] 2. ZMW 2000-6000 [ ] 3. ZMW 6000-12000 [ ]

4. ZMW 12000-30000 [ ] 5. More than ZMW 30000 [ ]

11. Has this income influenced the number of meals you take in a day? (Please tick appropriately in the box provided)

1. Yes [ ] 2. No [ ]

12. How many meals did you use to take before this Aquaculture farming? (Please tick appropriately in the box provided)

1. One [ ] 2. Two [ ] 3. Three [ ]

13. How many months in a year are you able to say you are food secure? (Please tick appropriately in the box provided)

1. 0-3 months [ ] 2. 3-6 months [ ] 3. 6-9 months [ ] 4. 9-12 months [ ]

14. How often did you go to the dispensary for treatment before you started engaging yourself with the Aquaculture enterprises? (Please tick appropriately in the box provided)

1. Once a week [ ] 2. Once in two weeks [ ] 3. Once a month [ ] 4. Once in two months [ ] 5. All the time [ ] 6. Not at all [ ]

5. How often do you go to the dispensary for treatment after the interventions on Aquaculture enterprises? (Please tick appropriately in the box provided)

1. Once a month [ ] 2. Once a week [ ]

3. Once in two months [ ] 4. It has been a long time [ ] 5. Not at all [ ]

16. How do you rate the accessibility to different types of foods and it having influence on your health status? (Please tick in the box provided)

1. Excellent [ ] 2. Good [ ] 3. Fair [ ] 4. Poor [ ]

17. Rate the effect of Aquaculture enterprises on the improvement of your housing? (Please tick in the box provided)

1. Excellent [ ] 2. Good [ ] 3. Fair [ ] 4. Poor [ ]

18. What would you proposed as the best way organizations can empower youth to start-up businesses like this? \_\_\_\_\_

### **5. Market linkages and gender participation**

1. How active are the women in marketing their farm produce? (Please tick in the box provided)

1. Very Active [ ] 2. Fairly active [ ] 3. Active [ ] 4. Not active [ ]

2. How often do men allow the women to be active in marketing their farm produce? (Please tick in the box provided)

1. Very often [ ] 2. Often [ ] 3. Sometimes [ ] 4. Not at all [ ]

3. How did you get engaged with the market you are supplying produce to? (Please tick in the box provided)

1. By chance [ ] 3. Linked by an organization [ ]

2. Knew them through other farmers [ ] 4. Through personal market search [ ]

4. Do you understand what contract farming is? (Please tick in the box provided)

1. Yes [ ] 2. No [ ]

5. How would you rate your engagement in contract farming? (Please tick in the box provided)

1. Excellent [ ] 2. Good [ ] 3. Fair [ ] 4. Poor [ ]

6. Which market are you selling your produce to on contract? (Please tick in the box provided)

1. Export market [ ] 2. Local Market [ ] 3. Both [ ]

7. How often do you supply the produce? (Please tick in the box provided)

1. Once a week [ ] 2. Twice a week [ ] 3. Once in two weeks [ ] 4. Once a month [ ]

### **6. Aquaculture empowerment and savings and credit activity**

1. Is there an age limit for one to participate in savings and credit activities? (Please tick in the box provided)

1. Yes [ ] 2. No [ ]

2. How do you utilize your money from the Aquaculture enterprise proceeds? (Please tick in the box provided)

1. Spend it on house hold needs [ ] 2. Pay school fees [ ]

3. Save some [ ] 4. Reinvest in farming [ ]

5. All the above [ ] 6. Luxury satisfaction [ ]

3 What percentage is reinvested back into Aquaculture production? (Please tick in the box provided)

1. 1- 20% 2. 20-40% [ ] 3. 40-60% [ ] 4. 60-80% [ ] 5. 80-100% [ ]

4. How would you rate your participation in any savings and credit activities? (Please tick in the box provided)

1. Excellent [ ] 2. Good [ ] 3. Fair [ ] 4. Poor [ ]

5. How much do you contribute for savings per month? (Please tick in the box provided)

1. ZMW 0- 100 [ ] 2. ZMW 100-200 [ ] 3. ZMW 200-500 [ ] 4. More than ZMW 500 [ ]

6. Is taking credit or accessing loan an option for you to get capital for your Aquaculture enterprises? (Please tick in the box provided)

1. Yes [ ] 2. No [ ]

7. How can you rate the access of credit for your Aquaculture enterprises? (Please tick in the box provided)

1. Excellent [ ] 2. Good [ ] 3. Fair [ ] 4. Poor [ ]

8. Where do you borrow credit from? (Please tick in the box provided)

1. Family members [ ] 3. Banks [ ] 4. Sacco [ ]

2. Group table banking activities [ ] 5. Friends [ ]

9. What collateral do you use to guarantee your loans? (Please tick in the box provided)

1. House hold goods [ ] 4. Group individual members [ ]

2. Personal Shares [ ] 5. Group shares [ ]

3. Personal Savings [ ] 6. Other (Specify)

10. How much is your latest loan amount borrowed for Aquaculture production? (Please tick in the box provided)

1. ZMW 1000- 3000 [ ] 2. ZMW 3000- 6000 [ ]  
3. ZMW 6000- 10000 [ ] 4. More than 10,000 [ ]

12. What is the minimum repayment period? (Please tick in the box provided)

1. One month [ ] 2. Three months [ ] 3. Six months [ ]  
4. One year [ ] 5. More than one year [ ]

13. How would you rate the payment of your loan consistently without defaulting? (Please tick in the box provided)

1. Excellent [ ] 2. Good [ ] 3. Fair [ ] 4. Poor [ ]

14. Does the repayment of the loan come from income from the Aquaculture enterprises? (Please tick in the box provided)

1. Yes [ ] 2. No [ ]

15. Have you borrowed credit in form of farm inputs? (Please tick in the box provided)

1. Yes [ ] 2. No [ ]

Please list them \_\_\_\_\_

16. Would you recommend a saving culture to fellow youth? (Please tick in the box provided)

1. Yes [ ] 2. No [ ]

Give reasons for your answer

## 7. Aquaculture empowerment and creation of self- employment

1. What do you think self-employment is? (Please tick in the box provided)

- a. A situation where an individual works for himself rather than working for an employer [ ]  
b. It is where an individual earns his income through conducting profitable operations from a trade or business that he operates directly. [ ]  
c. Earning one's living from one's profession [ ]  
d. To work with own terms and conditions [ ]

Other (Specify)

2. Do you think Aquaculture enterprises can provide self-employment? (Please tick in the box provided)

1. Yes [ ] 2. No [ ]

Please explain

3. Rate how the Aquaculture enterprise has provided employment for you? (Please tick in the box provided)

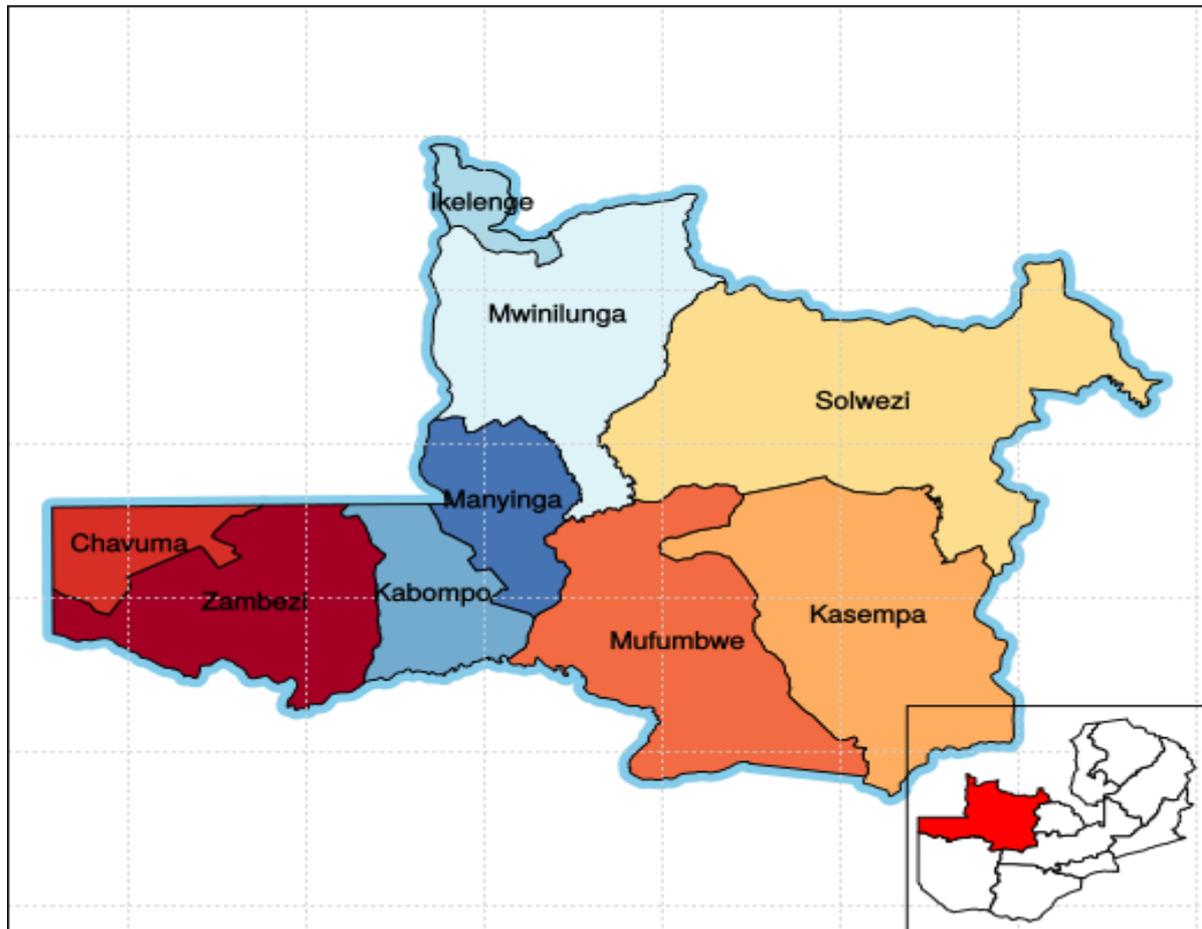
1. Excellent [ ] 2. Good [ ] 3. Fair [ ] 4. Poor [ ]

4. Given a chance for a white-collar job, would you leave the Aquaculture farming? (Please tick in the box provided)

1. Yes [ ] 2. No [ ]

Please explain your answer

### Appendix III: Map of Kasempa



Source: William, 2003.