**EXAMINE CHALLENGES HINDERING BUSINESS SUCCESS OF SMALL SCALE ENTREPRENEURS IN FISHERY SECTOR IN MULEBA DISTRICT, TANZANIA**

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# CERTIFICATION

The undersigned certifies that he has read and here by recommends for acceptance by the Open University of Tanzania a Proposal entitled, **“Examining the Challenges Hindering Business Success of Small Entrepreneurs in Fishery Sector in Muleba District”.** In partial fulfillment of the requirements for the award of Maters of Business Administration in Finance.



……………………………

Dr. Asha Katamba

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**ACKNOWLEDGMENT**

I express my foremost gratitude to the Almighty God for providing me with the strength and courage to pursue my studies and undertake this research. Special acknowledgment is due to my family for their invaluable assistance, advice, guidance, unwavering support, and encouragement throughout this study. The research demanded a considerable amount of time and resources, for which they rightfully could claim compensation. May God bless them for their selflessness.

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# ABSTRACT

The purpose of this study was to examine the challenges facing the success of small-scale fishery in Muleba District. From the literature review and the gap that was identified, the study came up with three specific research objectives which were proposed in the conceptual framework to encompass three main variables namely, economic challenges, technological challenges and environmental challenges. The objectives were (i) to examine economic challenge hindering business success of small entrepreneurs in fishery sector in Muleba district, (ii) to examine environmental challenges hindering business success of small entrepreneurs in fishery sector in Muleba district and (iii) to examine technological factors hindering business success of small entrepreneurs in fishery sector in Muleba district. The study issued a questionnaire which was composed of 357 respondents who were mainly fishermen, boat owners, fish sellers and a few government officers in the fishing department in Muleba. Data was analysed in mean values and standard deviation and also regression analysis. A multiple regression analysis as the final set of data analysis revealed that economic, environmental and technological challenges were negatively related to the success of small-scale fishery in Muleba District. These findings are important in two ways; first the study extends knowledge in fishery in an area which has been less studied. Second, the study is useful to various policy makers in the government especially in marine sector and aquatic animals especially to know where support is needed to improve the fishery sector.

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# LIST OF ABBREVIATIONS

**EAC** East Africa Community

**EC** Economic Challenges

**EEZ** Exclusive Economic Zone

**EFA** Exploratory Factory Analysis

**EnC** Environmental Challenges

**FAO** Food and Agriculture Organization

**GDP** Gross Domestic Product

**ICT** Information and Communication Technologies

**SME** Small and Medium Enterprises

**SSSF** Success of Small Scale Fishing

**TAFIRI** Tanzania Fisheries Research Institutes

**TC** Technological Challenges

**UCTAD** United Nations Conference on Trade and Development

**URT** The United Republic of Tanzania

# CHAPTER ONE

# INTRODUCTION

# Introduction

The major concern of this study is to examine the Challenges Facing Small Entrepreneurs in Fishery Sector in Muleba District. This research is arranged into chapters, this chapter presents; the background of the study, the statement of the problems, research objectives (general and specific objectives), research questions, findings and discussion, conclusion and recommendations as well as the significance of the study.

**1.2 Background of the Study**

Fisheries Sector in Tanzania is comprised of captured fisheries and aquaculture value chains (URT, 2022). The sector has been growing at an average annual rate of 1.5% and it plays important roles in food security and socio-economic wellbeing of the community. Current per capita fish consumption is 8.5 kg and contributes 30% of daily animal protein intake. It also contributes 1.7% of the GDP and provides direct employment 195,435 fishers and 30,064 aqua-farmers. In addition, about 4.5 million people (6.89% of total population) are indirect employment in various ancillary activities along the two value chains. The sector activities are dominated by small scale operations undertaken by artisanal fishers and subsistence aqua-farmers which are responsible for over 95% of the fish production.

According to Tanzania Fisheries Research Institute (2022), a quarter of Tanzania’s population heavily depends on fishery for economic purposes and food. Fishery contributes for about 1.4% of the national GDP and represents an important source of work and it employs over 180,000 people, and 19,000 in fish farming.

In Tanzania an inland fishery is carried out in the major lakes, the minor lakes, dams and rivers. The major lakes are the three internationally shared Lakes: Victoria, Tanganyika and Nyasa (URT, 2022). The minor lakes with significant fisheries are Rukwa, Babati and Manyara. There are also other smaller lakes with fish though the fisheries here are insignificant in terms of quantities landed.

In Kagera region which is the focus of this study, the sources of fishing grounds include rivers, manmade dams, and small inland lakes like Lake Ikimba, lake Nkwenda, and Burigi. The districts that are predominant to fishing activities include Muleba, Bukoba urban district, Bukoba rural and some parts of Biharamulo district (TAFIRI, 2022).

Prior study has found that, total fishery output in Tanzania has been relatively stable since the mid-1990s. Although this trend has been seen in capture fisheries throughout the world, other countries have been able to make substantial increases in fish supply by advancing aquaculture. Recently, Tanzania has started to implement several initiatives aiming to promote aquaculture development. But yet several factors are inhibiting the growth of the country’s fish supply. Post-harvest infrastructure is insufficient, and coordination of fish supply chains is poor. Furthermore, there is a paucity of knowledge regarding fish stock dynamics that may lead to inefficient management. Tanzania has also yet to design and implement an effective management strategy or conduct extensive industrial marine fishing operations in its exclusive economic zone (EEZ), and address issues of overexploitation of the fishery. Furthermore, post-harvest handling losses are significant, leading to an estimated 40% loss in fish yields (Medard 2014).

Illegal fishing and trafficking of fish and fisheries products across the country’s borders are major challenges: According to Cinner et al. (2012), illegal extraction and trade are diverting valuable resources that could be utilized for national economic growth and poverty reduction strategies. Other challenges that fisheries face include the use of inappropriate fishing gear; over-exploitation; destruction of fish habitats though blast fishing and other harmful practices; high post-harvesting loss; and high export rates of commercially valuable fish species. Climate change also poses a significant threat to Tanzania’s coral reef fisheries, whereas Fröcklin, et al (2013), say “A recent study found that coastal fishing communities in Tanzania were particularly sensitive to climate change due to their high dependence on fisheries for food security and livelihoods”.

## Statement of the Problem

## The FAO estimates that about one billion people world-wide rely on fish as their primary source of animal protein (FAO, 2000). Fish also has substantial social and economic importance to both in government revenues and to the individuals involved in fishery.

## 

According to URT (2022) Muleba District vests on fishing as a back born sector in earning lives and economic prosperity, but apart from being the second largest economic activity to take place in Muleba District, it seems that small fishery entrepreneurs are still swimming in a pool of poverty. Several initiatives have been put in place to promote fishing industry in a District including; supporting fish land-based facilities such as fish landing sites, fish market and cold store facilities, offering trainings to the fisher men, supplying fishing tools and equipments, discouraging illegal fishing activities (URT, 2022). Irrespective of the efforts and initiatives undertaken by the government to promote fishing, SMEs in fishery sector in Muleba district are still facing different challenges and hence have failed to achieve maximum growth and hence have remained stagnant.

Prior studies have found that fishing industry has faced various challenges some are economic, some are environmental and yet some are economical related. Since these challenges are not uniform and they vary according to geographical location, the extent of them also differs significantly. Some of these challenges are categorized as economic/macro while others are individual related. Hence, it becomes important to examine these challenges in Muleba District so as to draw attention to policy makers where they have to focus on inducing the strategies to implement so as to foster growth of this important sector which is dependable by the people in their daily lives and also it contributes in the GDP growth of the region. Hence, there is need to investigate the challenges facing fisheries in Muleba so as to advise the authorities on how to tackle these challenges and to provide long term solution to the problem. This has been a heart of this study to examine the Challenges Facing Small Entrepreneurs in Fishery Sector in Muleba District.

## 1.4 Objective of the study

### 1.4.1 Main Objective

To examine Challenges hindering business success of small entrepreneurs in fishery sector in Muleba District

### 1.4.2 Specific Objectives

# The study includes three specific objectives which are:

1. To examine economic challenge hindering business success of small entrepreneurs in fishery sector in Muleba district
2. To examine environmental challenges hindering business success of small entrepreneurs in fishery sector in Muleba district
3. To examine technological factors hindering business success of small entrepreneurs in fishery sector in Muleba district

# 1.5 Research Questions

# The study includes three research questions which are:

1. What are the economic challenges hindering business success of small entrepreneurs in fishery sector in Muleba district
2. What are the environmental challenges hindering business success of small entrepreneurs in fishery sector in Muleba district
3. What are the technological factors hindering business success of small entrepreneurs in fishery sector in Muleba district

# 1.6 Significance of the Study

This study is important theoretically and in practice. Theoretically, the study extends knowledge in fishery in an area which has been less studied. The literature can be expanded to study the challenges hindering success of fishery in other parts of the African continent. Practically, the study has revealed challenges facing fishery sector in Tanzania and Muleba. This foundation of knowledge can be expanded to other sectors in the country. Therefore, the study is useful to various policy makers in the government especially in marine sector and aquatic animals especially to know the areas where improvements are needed to support the fishery sector.

# 1.7 Limitations of the Study

This study is expected to be obscured by different obstacles just as been projected by a researcher by considering the nature of the study and the nature of the geographical area where a research is expected to be carried out. Below are some of the projected limitations. Remoteness of some areas: This study is expected to be conducted at Muleba District. This district has 31 total numbers of wards, but data for this study will be intensively collected from five wards which are engaged in fishing activities. Those wards are not accessed so easily due to their geographical locations. It is difficult to reach the island wards because of not having so many alternative ways to reach them, they only use boats which might be dangerous and prone to accident; this journey is so scary and needs some optimal efforts. But also, the wards located along the shore of Victoria are not easily accessed due to high standing cliff and absence of the well-constructed roads.

## CHAPTER TWO

## LITERATURE REVIEW

## Introduction

This chapter covers the reviewed literature. Elements covered in this part include; the key concepts related to a study, theoretical analysis, the empirical analysis, as well asthe conceptual framework.

## Definition of key terms

## Economic Challenges

According to Dey et al. (2007), Economic challenges are variables that impact the economy as a whole, as well as individual businesses. Economic factors include tax rates, exchange rates, inflation, labor supply and demand, wages, laws and policies, government activities, and recessions.

* + 1. **Environmental Challenges**

According to Gaffin, (2004), environmental factors make up the physical, social, ecological and attitudinal elements in which people live and conduct their lives.

* + 1. **Technological Factors**

According to Arnell, (2010) technology is a broad term that refers to the means by which we can adapt to our environment, control our environment, and even change it. You can break technology down into two broad categories: products and processes

## Entrepreneurs

According to Brooks, (2009), an entrepreneur is an individual who creates a new business, bearing most of the risks and enjoying most of the rewards.

## Fishery

According to the FAO (2022) a fishery is an activity leading to harvesting of fish. It may involve capture of wild fish or rising of fish through aquaculture. It is typically defined in terms of the "people involved, species or type of fish, area of water or seabed, method of fishing, class of boats, and purpose of the activities or a combination of the foregoing features.

## Empirical Literature Review

## Economic Challenges facing Small Fishing Industry

Fishing is one of the major economic activity that has promoted the world development, Small-scale fisheries contributes to development in the areas of employment, with over 41 million people worldwide, the vast majority of whom live in developing countries, working in fish production; food security and nutrition. But at the same time the small-scale fisheries face different challenges apart from havening positive impacts in economic and social wellbeing in each community (Fröcklin., et al, 2013).This section discuss the economic challenges hindering success on fishermen, environmental challenges hindering success of fishermen as well as the technological factors hindering success of fishermen in a global scale.

The first economic factors hindering fishery has been referred to asLimited Access Barriers to International Markets (Medard, 2014). This challenge has been named as one of the major concerns to small-scale fishers and traders in EAC is the question of their capacity to comply with the standards at the global market (Machumu, 2013). As a result, fishing products have either been sold at a low price or have failed to compete with their counter-parts, hence causing losses to the fishing farmers.

According to Brummett (2008),local actors are unable to keep up with the level of investments and technical conditions required to comply with international markets, reducing further their competitiveness and their chance to integrate in the global market. This has been exacerbated by private standards and certification requirements which are often unaffordable for small scale fisheries (TAFIRI, 2022). Similarly, studies have found that most supermarkets want standardized fish prices which cannot be supplied by Small scale fishers (Brummett, 2008). This has resulted into small scale fisheries to sell their products locally through middlemen who are not formerly authorised and who determine the price of fish products at the expense of volatile fish market segmentation (TAFIRI, 2022). This way of selling fish and fish products has negative consequences to small scale fish seller due to lack of consideration on the cost of investment, weather condition and other overhead costs.

It has been postulated by Medard (2014) that Uganda is currently facing a decline in fish exports in terms of value and volumes. For instance, Bio Mass of Nile perch has been propelled by the rising demand (UNCTAD 2017) to the extent that processing factories accept 1kg Nile perch compared to accepting 2kg before (UNCTAD, 2017). In Burundi, the high dependency on fish leads to overexploitation, particularly due to a lack of alternative jobs and education. In Tanzania, catch per unit effort has fallen from 11 tons/vessel down to 6-7 tons/vessel (URT, 2022).All these have resulted into constant hiking fish prices which has negative consequences to the small-scale fish sellers.

The last but not least factor hindering fishing is an importation of fishes from abroad: According to FAO (2022), currently, imported frozen fish from China forms a main competitor for local production. In 2017 alone, Tanzania imported 1,636 tons of frozen tilapia, being a 10-fold increase compared to 2014. Practically all imported tilapia comes from China. China has a very competitive industry and brings products on the market for prices which are hard to compete with. As an unpackaged product primarily sold whole in frozen form, consumers have difficulties identifying the difference between Tanzanian produced and imported fish. Yet, consumers are indicating that they are willing to pay between 1,277 TSh /kg to over 6,000 TSh /kg more for Tanzanian tilapia over imported tilapia, if they can be sure of the origin [1]. In other words, if an imported fish would be sold for 6,000 TSh/kg, it is estimated that Tanzanian customers are willing to pay 7,277 TSh/kg to 12,000 TSh/kg for Tanzanian fish. Hence, the study puts forward the following hypothesis:

***H1:*** *Economic challenges will negatively affect small scale fishery in Muleba Distrct*

## Technological Challenges Facing Fishing Industries

The first technological hindrance toward fishing industry is the post-harvest losses: All Eastern African countries suffer from the lack of requisite storage opportunities and cold chains. Fish is commonly transported in sacks, which cannot keep it fresh. This is why it is estimated that as high as 25% of fish caught and landed never makes it to the mouth of the consumer. Such high losses are unsustainable.

Another factor is lack of processing facilities/knowledge: According to Machumu, (2013), Fish is a raw product, alert to cobalt, crude oil etc. Fisher cannot process this raw material without expertise, hence no chance to add value to the raw product. Traditional processing and preservation techniques employed by artisanal fishers in the absence of refrigeration can increase the concentration of harmful chemicals to limits above those specified by international regulations. This has been the experience in most of African Countries, where drying of fish is performed under poor conditions and the dried fish also badly stored hence affecting its marketability.

The challenge of By-catch: According to Maurice (2012), By-catch refers to the fish, seafood, turtles, seabirds and other animals that are not targeted by fisheries, but are incidentally caught by broad-sweeping fishing mechanisms like gillnets and bottom trawls. Gillnets are huge nets that spread miles wide, catching anything that swims into them, including sharks, sea turtles, and dolphins. Bottom trawls comb the bottom of the sea, dragging creatures, coral, and anything else in its path along with it. Both these methods account for the careless and wasteful deaths of countless sea creatures every day. The stats on by-catch are astounding. Seafood Watch estimates that up to six pounds of other species are discarded for every pound of shrimp caught. Further, they also attribute the fact that over 15% of shark species are threatened with extinction in large part to the predominance of poorly targeted fishing methods, such as loglines, trawls and purse seines. According to Maurice (2012), this problem has been also observed in small lakes and major lakes like Lake Victoria. In Lake Victoria there are plenty of species that are being catch by the fisheries, this has been hampering their fishing activities due to these factors, fishering in many parts of Tanzania especially lake zone has become stagnant. The following hypothesis is posited:

*H2: Technological challenges will negatively affect small scale fishery in Muleba Distrct*

## Environmental Challenges Facing Fishing Industries

The consequences of climate change are a threat to Small Scale Fishers especially in East African Country member states (Cinner, et al, 2012). This is because the fishing area surrounding the EAC is already being manifested in form of depleted fish stocks (Cinner et al., 2012). Example fishing on Lake Tanganyika is increasingly affected by climatic change that have among other reasons led to reduced fish stocks, and that if nothing is done to react to the indicators of climate change, the socio-economic consequences could result in conflict (Machumu, 2013). This could cause a physical fight over access and sharing of natural resources amongst the beneficiary countries, thereby threatening social stability and security

Furthermore, Wind Speed and Direction have been reported as a threat that affects fishing around the lake zone (Merdard, 2014). This is because strong wind can negatively affect the quality of the fishing depending on its direction and speed (Delgado et al, 2003). As wind blows across the water surface, friction between the water and air causes the surface of the water to start moving in the direction of the wind which creates waves. Both the distance the wind blows over the water (the fetch) and the duration over which it blows will either increase or decrease the size of the waves as individual peaks join to create larger waves (Delgado et al., 2013). Due to the fact that most small scale fishermen depends entirely in winds to have their daily harvest, this over dependency has had a negative effect by lowering the daily return should the wind blow in a negative direction or in the cases of strong winds.

Similarly, (Dey et al, 2017) found that strong winds create waves and waves are often a more important factor to consider than currents. When there is heavy winds, fish find it difficult to see predators, making them inclined to come to the surface to feed. Therefore, over dependency on this factor of winds/waves can have uncertainty on the output expected to harvest by small scale fishery. The following hypothesis becomes important:

***H3****: Environmental factors will negatively affect small scale fishery in Muleba Distrct*

## Conceptual framework

The research title consists two variables; dependent and independent variables. The conceptual framework of this study describes those variables by indicating the relationship between dependent and independent variables under the study as described below;

**Independent Variables Dependent Variable**

**Economic challenges**

* Small capital
* Lack of competitiveness
* Fixed selling prices

**Technological challenges**

* Low level of ICT skills
* Low Level of ICT usage
* Lack of Modern Fishing Tools

**Environmental Challenges**

* Wind variation
* Possible conflicts
* Environmental Compliance

**Success of Small Scale fishery**

* Increase household income
* Steady profitability
* Growth in capital base

### 

**Figure 2.1 Conceptual framework**

## Research Gap

The reviewed literature demonstrates the economic, technological and environmental factors that challenge fishing activities around the world. Few literatures have mentioned the challenges that fishers and small entrepreneurs dealing with fishing activities in Lake Victoria faces specifically the all countries contacted or touched to Lake Victoria to include Tanzania, Kenya and Uganda. Prior studies in this area have discussed in a more general perspective on the challenges facing fishing sector which can be difficult to establish a single unit or district so as to find solution to the problem. For instance (TAFIRI, 2022; Medard, 2014) have examined on the impact of global warming in the fishing sector. Meanwhile (Frocklin, 2013; Gaffin, 2014) have examined the impact of lack of competitiveness of farmers in the world market. Yet (Janse, et al., 1999) have examined the effect of inflation and changes in interest rates and hence surged costs of fish products in the local markets. Specifically, little is known in Muleba and the type of the challenges that the small fishery is facing in this district where majority of the people depend fish products for their sources of income on a daily basis.

Furthermore, the mode of enquiry has focused on the secondary data and literature evaluation (URT, 2022; TAFIRI, 2022). Meanwhile few have focused on interviews data and small sample sizes. These methodological approaches lack representativeness of the population Therefore, this study will focus on the challenges facing small fish farmers in Muleba District by involving the sample from the total population of all fish farmers which will be wider and hence better generalisation of the findings to other districts in Kagera region.

### CHAPTER THREE

### RESEARCH METHODOLOGY

### Introduction

**This chapter discusses the research philosophy, research design that the study will use in finding the answers to the stated research questions and hence to validate the hypotheses. The chapter also details the study population, sample size and sampling procedures. Finally, the chapter explains how data will be collected, the type of data analysis, validity and reliability and ethical issues that the study will adhere to in order to make the findings more meaningful.**

### Research Philosophy

This study adopted a positivist research philosophy by testing a causal relationship between two variables which are the challenges facing small businesses in fishery sector and the dependent variable is the business success of the SMEs. In line with this, a review of existing literature and empirical studies in chapter 2 provided variables that establish the nature of the cause (challenges) and the effects (success of business). While the business success remains largely as one main dependent variable, the independent variable has taken three folds, namely economic challenges, environmental challenges and technological challenges. Therefore, by adopting a positivist research philosophy, the study will test the most significant factors to validate the hypotheses in an objective manner (Pallant, 2007). This enabled the study to obtain the most challenging factors that hinder potential growth of SMEs in the fishery sector in Muleba District.

### Research design

The researcher of this study employed a quantitative research design by targeting a large sample of respondents. The respondents who will be surveyed under this study are the Small fishing entrepreneurs including; fishermen, boat builders, aquaculture, net menders, the local government officials of Muleba District Council. This design enabled a researcher to investigate the challenges facing small entrepreneurs in fishery sector in Muleba district by inferring the relationship between variables under the study (Hair et al., 2019). Furthermore, the quantitative design was used in analyzing and reporting data specially by using charts, graphs, and tables, mean, median, standard deviation and also inferential statistics.

### Scope of the study

This study was conducted at Muleba Disstrict especially in the wards engaging with fishing activities. According to Dunn, (2019), Muleba is one of the nine districts of the Kagera Region of Tanzania. It is bordered to the north by Karagwe District, to the East by Lake Victoria, to the southeast by Biharamulo District, to the south by the Bukoba Rural District and to the west by Missenyi District. The targeted population under this study are; Fishermen, Boat builders,Aquaculture, Net menders, the local government officials and some dwellers in Muleba District who were seem to have data related to fishing activities.

### The Targeted Population

The data of this study was collected from wards engaged in fishing activities in Muleba District which are 13 in total. According to URT (2022) Muleba district contains the total number of 4,489 small entrepreneurs engaging in fishing. This figure of 4,489 SMEs in fishery sector in Muleba was taken as the population; and from which a sample size was determined to be a representativeness of the population.

**3.5** **Sampling procedure**

This study used a stratified sampling technique where the respondents were selected based on the geographical areas they belong; simple random sampling was also applied in choosing the respondents in each division, so as to obtain the representatives in each cluster of people from each community members.

### 3.6 Sample Size

From the population of 4,489, a sample size was considered to be357 respondents. This estimation of sample size has been considered as recommended by Table of Krejicie and Morgan (1970) as indicated in the appendix 2. It is indicated that a population of 4,489 corresponds to a sample size of 357. Therefore, the study distributed about 400 questionnaires in order to arrive at a sample size of 357 after omitting those that were not filled well.

### 3.7 Research Variables

Research variables are the factors to be investigated or are attributes, features, concepts or social phenomena that can be measured by the researcher. Based on the title of this study, the variables under investigations are; dependent variables and independent variables just have been identified in the chart below;

**Independent Variable (IV) Dependent Variable (DV)**

Challenges

Success of business

### 3.8 Data Collection Method

In this study data were collected by using administered questionnaires from the target population which are; Fishermen, Boat builders, Aquaculture as well as the Net menders. The questionnaire used were closed ended one measured in 5-Likert scale where 1-strongly disagree, 2-disagree, 3-neutral, 4-agree and 5-strongly agree. The questionnaires were distributed in person after recruiting research assistants to help in the process of data collection. This simplified the task of getting the respondents easily due to the environment of the Muleba District.

### 3.9 Data analysis

Data analysis was done by using descriptive and inferential statistics. This study has adopted a quantitative approach. Therefore, data were analysed in descriptive and inferential statistics. Descriptive statistics includes analysing data in the form of mean and standard deviation (Kumar, 2013). However, the most common measure of variation is the mean (Field, 2013). In order to explain the meaning of the figures calculated from the mean values, researchers have proposed the following measurements to guide interpretation:

# Table 3.1: Interpretation of Mean Scale

|  |  |
| --- | --- |
| Mean ScMean Scale rement | Interpretation Interpretation |
| 1.00-2.33 | Low |
| 2.34-3.66 | Medium |
| 3.67-5.00 | High |

**Source**: Sekaran & Bougie (2010)

Additionally, the study checked to confirm the reliability using the measure of internal consistency of the measured scale before proceeding for further preposition. The most common measure of internal consistency is the Cronbach Alpha (Field, 2013; Sekaran & Bougie, 2010). Again, researchers have proposed the values to be used for computing acceptable benchmarks of Cronbach Alpha.

# Table 3.2 Cronbach Alpha Reliability Scale Interpretation

|  |  |
| --- | --- |
| Cronbach Alpha Values | Reliability |
| 0.70-1.00 | High |
| 0.60-0.69 | Moderate |
| 0.00-0.59 | Low |

**Source:** Sekaran & Bougie (2010)

**3.10 Inferential analysis**

Inferential analysis is an advanced step to analyse quantitative data (Hair et al., 2010). It is an easy way to generalize the results of the sample based on the given population of the study. Through the use of inferential analysis, the study can draw a conclusion by inferring the results on whether to reject or accept the hypothesis (Kumar, 2013). Consequently, this study used one-way ANOVA, Exploratory factor analysis (EFA), Pearson Product Correlation and finally Regression analysis.

### 3.10.1 Data Validity and reliability

Reliability is defined as the degree to which an assessment tool or instrument provides a stable and consistent result in its repeated application (Malhotra, 2009). That is, the level of reliability of the instrument is an indication of consistency of the variables. In this research, reliability of research instrument will be measured by Cronbach’s alpha coefficient. It is recommended that Cronbach’s Alpha values (α) of 0.7 and above is an indication of a sound and reliable measure of the variables being investigated (Malhotra, 2009). This criterion was considered as a benchmark to measure reliability of the instruments.

### 3.11 Ethical consideration

Ethics are the moral principles that govern people in doing different activities in research (Silverman, 2007). In this research several ethical issues will be considered as suggested by prior scholars as discussed in this section. First, the researcher had to see permission from the respondents before collecting the dat. correct citations and referencing was observed in this work. Secondly, confidential information was adhered to; and hence, the researcher continues to keep confidential and without disclosing the names of respondents. This will ensure anonymity by avoiding questions that lead to the inversion of personal privacies (Silverman, 2007).

Similarly, neutrality was observed during sampling selection. Furthermore, no coercion was expected to be used when finding the participants and respondents in answering researcher’s questions (Silverman, 2007). Hence participants were ensured of freedom of participation during data collection.

### CHAPTER FOUR

### FINDINGS AND DISCUSSION

### Overview of the Chapter

This Chapter presents the findings from the survey data that was collected from the respondents in Muleba District. The researcher distributed a total of 400 questionnaires so as to arrive at a required sample size, however, a total of 357 were received dully filled well from the beginning to the end. The chapter therefore analyses the data in form of descriptive and inferential statistics. The data are then presented in the format that includes an interpretation and discussion of the findings.

### Demographic Profile of the respondents

This section presents demographic profile of the respondents who were selected respondents from Muleba in Kagera region who were mainly SMEs in fishing sector. The table 4.1 below shows respondents profile. The respondents who filled in the questionnaire composed of 75.1% (n=268) females and 24.9% (n=89) were males. This shows that more males can be in the fishing industries than females in Muleba district. This can be due to the fact that more men have more time spending at fishing industries as the source of income for their families than female who are busy doing other activities including taking care of their families.

As regards with age of respondents, the majority of them were the age group 18-24 year 32.5% (n=116), followed by 25-34 who were 26.6% (n=95), while 35-44 years were 19.9% (n=71), also the group of 45-54 years were 12.1%(n=43) and finally those who are above the age of 55 years were the least and were only 8.9% (n=32) of all the respondents. This implies that more youth have engaged in fishing activities than the other category of adults in Muleba District.

# Table 4.1 Profile of the respondents

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | **N** | | **%** |
| **Gender** |  | |  |
| Females | | 24.9% | 89 |
| Males | | 75.1% | 268 |
| **Age** |  | |  |
| 18-24 years | 18-24 years | | 32.5% |
| 25-34 years | 25-34 years | | 26.6% |
| 35-44 years | 35-44 years | | 19.9% |
| 45-54 years | 45-54 Years | | 12.1% |
| 55 and above | 55 years and Above | | 8.9% |
| **Position in fishing** |  | |  |
| Fishermen | 41.2% | | 147 |
| Boat Builders | 9.0% | | 32 |
| Aquaculture | 6.7% | | 24 |
| Net menders | 5.6% | | 20 |
| Fish Sellers | 27.7% | | 99 |
| Local government Officer | 9.8% | | 35 |
| **Working experience in Fishing Industry** |  | |  |
| 0 to 5 Years | 26.9% | | 96 |
| 6 to 10 Years | 22.4% | | 80 |
| 11 to 15 Years | 13.2% | | 47 |
| 16 to 20 Years | 29.9% | | 107 |
| 21 Years and above | 7.6% | | 27 |
| **Education Level** |  | |  |
| Never gone to school | 10.9% | | 39 |
| Primary education | 34.5% | | 123 |
| O-level | 14.9% | | 53 |
| A-level | 5.6% | | 20 |
| Certificate | 14.8% | | 53 |
| Diploma | 8.7% | | 31 |
| Degree | 6.4% | | 23 |
| Master | 2.8% | | 10 |
| Other | 0.8% | | 5 |

Furthermore, with regards to their position in fishing industry, there were 41.2% (n=147) respondents who are fishermen, while 9.0% (n=32) are boat builders and also 6.7% (n=24) who are Aquaculture, 5.6%(n=20) were Net menders, not only that but also 27.7%(n=99) were Fish sellers and finally there were 9.8% (n=99) who were Local government officers. This shows that there are a large number of people who are fishermen in Muleba district.

The fourth item of personal profile was the working experience of respondents. Majority of them 29.9% (n=107) had 16-20 working experience, while 26.9% (n=96) of the respondents had 0-5 years working experience, followed by 22.4% (n=80) of the respondents had 6-10 years working experience, not only that but also 13.2%(n=47) of the respondents had 11-15 years working experience and finally 7.6% (n=27) of the respondents had 21 years and above working experience.

The last item of personal profile was the educational level of respondents. Majority of them 34.5% (n=123) had a primary education, 10.9% (n=39) of the respondents never gone to school, 14.9% (n=53) of the respondents had an O-level education, 5.6%(n=20) of the respondents had an A-level education, 14.8% (n=53) of the respondents had had a Certificate, 8.7%(n=31) had a Diploma, 6.4%(n=23) had a Bachelor degree, 2.8%(n=10) had a Master, not only that but also 0.6%(n=2) had a PHD, and finally, 0.8%(n=3) had other professions.

# 

# Table 4.2 Reliability Statistics for the Survey

|  |  |  |
| --- | --- | --- |
| Variable | No. of items | Cronbach Alpha |
| Economic Challenges (EC) | 8 | .761 |
| Technological Challenges (TC) | 4 | .892 |
| Environmental Challenges (EnC) | 4 | .783 |
| Success of Small-scale fish (SSF) | 3 | .756 |
|  |  |  |

Table 4.2 above shows the reliability statistics for the survey which had comprised of 19 continuous data measured in 5-point Likert scale from section B up to section C of the given questionnaire. The results of the SPSS showed Cronbach alpha of .761 for the variable “Economic Challenges”, Alpha values of .892 for the variable “Technological Challenges”, Meanwhile, Alpha value of .783 was recorded for the variable “Environmental Challenges and Lastly, the Alpha value of .756 for the variable “Success of small-scale fish”. According to Hair et al. (2010) and also Kumar et al., (2013), when Cronbach alpha value has a loading of .70 and above, the results are regarded as reliable and the dimension scales of the survey allows the researcher to continue to further parametric analysis. Data is then analyzed to reveal mean scores to address all the three specific research objectives as posited in Chapter 1.

### Descriptive statistics for the Findings

It was important to analyze the data in form of mean and standard deviation. Mean has been named as the most used descriptive measure of central tendency which can enable the researcher to easily preview the initial results hence, making a ground work for further predictions *: (Sekaran & Bougie, 2010)*. The Table below (Table 4.2) shows recommended interpretation value for mean in descriptive statistical analysis.

# Table 4.3 Interpretation of Mean Scale

|  |  |
| --- | --- |
| Mean ScameanMean Scale alele Measurement | Interpretation iInterpretation |
| 1.00-2.33 | Low |
| 2.34-3.66 | Medium |
| 3.67-5.00 | High |

**Source**: Sekaran & Bougie (2010)

From the above interpretation in Table 4.2, this study will use this to present analytical findings for the variables and their indicators.

### Descriptive Findings for Economic challenges (EC)

The first research objective had a purpose of assessing the effect of Economic challenges on the Success of Small-scale fish (SSSF). The variable EC was measured with eight (8) items as shown on the questionnaire and on the table below. The mean value was used to interpret the scores and to make meaning of the results so as to draw initial prediction of each indicator of the questionnaire.

# Table 4.4 Mean and SD for the Construct Economic challenges (EC)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Variable: **Economic challenges (EC)** | Mean | SD |
| EC1 | I face several economic challenges in fishing activities | 3.5 | .632 |
| EC2 | But all of the challenges are left un solved | 4.2 | .542 |
| EC3 | Some challenges are resolved by the government | 3.8 | .526 |
| EC4 | Lack of capital hinder my activities | 3.6 | .421 |
| EC5 | Fluctuation of market for fishery product affect me | 4.1 | .733 |
| EC6 | There is international competition that affect my activities | 2.5 | .451 |
| EC7 | Poor government investment in this sector affect me | 4.3 | .487 |
| EC8 | There is no supportive fishing infrastructure | 4.3 | .487 |
|  | **Overall Mean value of Economic Challenges (EC)** | **4.2** | **.607** |

The first factor that was proposed on the conceptual framework was the economic challenges and how it will affect the Success of Small-scale fish. Table 4.3 shows that the mean findings for economic challenges had a mean value overall of 4.2.Specifically, all the items had a higher mean value except one item which was “There is international competition that affect my activities” which had mean of 2.5 which is quiet medium as compared with other mean scores on the remaining items that ranged from 3.6 and above. These results mean that the respondents were satisfied with the economic challenges.

### Descriptive Findings for Technological Challenges

This section presents data to respond to the second specific research objective of the study which intended to determine the effect of Technological Challenges on the Success of Small-scale fish. This objective was measured by Four (4) items in a questionnaire as depicted in Table below.

# Table 4.5 Mean and SD for Technological Challenges

|  |  |  |  |
| --- | --- | --- | --- |
|  | Variable: **Technological Challenges (TC)** | Mean | SD |
| TC1 | There are several technological challenges that hinder fishing activities | 4.4 | .727 |
| TC2 | Post -Harvest Losses is greater and affect our business | 4.0 | .632 |
| TC3 | There are no storage facilities to fishery products | 3.6 | .483 |
| TC4 | There is By-Catch problem facing our activities | 2.1 | .654 |
|  | **Overall Mean for Technological Challenges (TC)** | **3.5** | **.624** |

The second factor that was proposed on the conceptual framework was the Technological Challenges. The indicators that were tested were four (4) in total and were also measured in Likert scale. The mean value of all the indicators is 3.5. The most agreed item was “There are several technological challenges that hinder fishing activities.” which had mean value of 4.4. Meanwhile, the least rated item was “There is By-Catch problem facing our activities” which had mean value of 2.1 (low). These findings mean that some people still have inability of using technological challenges due to little understanding.

### Descriptive Findings for Environmental Challenges (EnC)

The third research objective was related to how the environmental challenges affect the Success of Small-scale fish and how that makes them to be satisfied with fishing industries. This variable had four (4) items that were measured in scale. The table below shows how respondents ranked the items and its overall mean score.

# Table 4.6 Findings for environmental challenges (EnC)

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Environmental Challenges (EnC)** | **Mean** | **SD** |
| EnC 1 | I face several environmental challenges in fishing activities | 3.6 | .627 |
| EnC 2 | But all of the challenges are left un solved | 4.3 | .832 |
| EnC 3 | Variations in wind speed and directions has negative impacts in fishing | 3.7 | .703 |
| EnC 4 | There are climatic changes that affect our business | 4.1 | .454 |
| **EnC** | **Overall Mean value of Environmental Challenges (EnA)** | **3.9** | **.654** |

The findings above in Table 4.6, showcases the mean values of the variable ‘environmental challenges (EnvC) as was composed in the questionnaire. The variable EnvC was measured with four (4) indicators. All the items had mean value of 3.9 which is regarded as “high”. The item that was highly rated was “But all of the challenges are left UN solved” which had mean value of 4.3 followed by “There is climatic changes that affect our business” which received a score of 4.1. The overall mean value was 4.0. These findings indicate that the item ‘EnC2’ (But all of the challenges are left UN resolved) were more acceptable by majority of respondents. This is understandable given the fact that majority of Tanzanian prefers more challenges be solved by the government in order to improve the life of many citizens.

### Success of Small-scale fishery (SSSF)

The variable Success of Small Scale Fishery (SSS) was a dependent variable which was measured by four (4) indicators as shown on Table 4.7 below. The table below shows how respondents ranked the items of the dependent variable so as to confirm the inclusion of the factors into the SSSF parameter.

# 

# Table 4.7 Mean and SD for Success of Small-scale Fishery (SSF)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Success of Small-scale fish (SSF) | Mean | Value |
| SSF 1 | Increase household income | 4.2 | High |
| SSF 2 | Steady profitability | 3.7 | High |
| SSF 3 | Growth in capital base | 4.0 | Medium |
| SSF 4 | Success of Small-scale fish | **3.9** | **High** |

The last factor was the dependent variable (Success of Small-scale fish) which is the end result or the outcomes of the study. It is important to evaluate the mean values of the dependent variable so as to link the scores with the independent variables. Table 4.7 above revealed the mean findings for Success of Small-scale fish which was measured by four items. Three items received a higher score values with overall mean score of 3.7, 4.0 and 4.2 respectively. Item 1 (SSF1) which is “Increase household income” scored 4.2 high mean value while item 3 (SSF3) namely “Growth in capital base” scored high mean value of 4.0. Meanwhile item 2 (SSF2) which was “Steady profitability” scored mean value of 3.7. These findings show that the DV actually measures both economic, environmental and technological factors is reliable as the respondents agreed to most of the items at ‘high value’ of the mean well above the average.

### Regression Analysis

This study sought to run a regression analysis to preview and confirm the descriptive statistics results of the mean values reported above. Regression results show the most significant variables which influence Success of Small-scale fishery. The study started with confirmation of multivariate assumptions.

### 4.8 Testing Multiple Regression assumptions

#### 4.8.1 Test of auto-correlation assumption

The first important assumption is the auto correlation. This is a violation of data whereby the residuals are said to be unrelated. This study checked for the auto correlation through a Durbin-Watson (d) statistics. As a rule of thumb, Dubin Watson test is suggested to be between the range of 1.5 to 2.5 (Field, 2013). Table 4.8 shows that the values of Durbin-Watson of 1.535 which is well within the acceptable threshold. It can be concluded that auto correlation does not exist.

|  |  |
| --- | --- |
| Table 4.8: Test of auto-correlation assumption | |
| Model | Durbin-Watson |
|
| 1 | 1.535 |
| a. Predictors: (Constant), EC, TC, EnvC | |
| b. Dependent Variable: Success of Small Fishery (SSSF) | |

### 4.9 Test of Normality Assumption

Another test of assumption was for normality of data. The regression equation is based on data that is normal which can either be measured using historgram or Skewness and Kurtosis tests (Hair et al., 2019; Field, 2013). Studies have suggested the benchmarks for the values of Skewness and Kurtosis to be in the range of -2 to +2 (Hair et al., 2019; Field, 2013; Kumar et al., 2013). If the vakue of Kurtosis fall within -2 to +2, is said to be normal while if the data is outside that parameter is said to be non-normal. In this study, Table 4.9 indicates that the residuals have a normal distribution as the values of Kurtosis and Skewness fall within the suggested threshold. Consequently, the study concluded that regression analysis could be conducted.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Table 4.9: Test of Normality-Descriptive Statistics | | | | | | |
|  | N | Skewness | | Kurtosis | |
| Statistic | Statistic | Std. Error | Statistic | Std. Error |
| Value based pricing | 357 | -.112 | .114 | .215 | .134 |
| Competition based pricing | 357 | -.233 | .114 | -.285 | .134 |
| Cost based pricing | 357 | -.221 | .114 | .201 | .134 |
| Sales performance | 357 | -.273 | .114 | -.269 | .134 |
| Valid N (listwise) | 357 |  |  |  |  |

### 4.10 Multicollinearity

Multicollinearity is a violation of one assumption of multivariate which may result into distortion of parameters and as a result, the values of F-test statistics might be too large but not significant (Field, 2013). In order to confirm the multi-collinearity assumption, Value Inflation Factor (VIF) is used to conduct the test in the SPSS. It is recommended that the values of VIF should be in the range from 1.522 to 1.622 for the study to be granted to proceed to further inferential analysis (Field, 2013). Table 4.10 presents the test for multicollinearity.

# Table 4.10: Test of multicollinearity assumption

|  |  |  |  |
| --- | --- | --- | --- |
| Model | | Collinearity Statistics | |
| Tolerance | VIF |
| 1 | (Constant) |  |  |
| Value based pricing | .651 | 1.549 |
| Competition based pricing | .638 | 1.622 |
| Cost based pricing | .612 | 1.533 |
| a. Dependent Variable: sales performance | | | | |

### 4.11 Correlation analysis results

Correlation analysis was conducted to test inter-item relationships and to conform any significant relationship between variables. It is recommended that, correlation coefficient values ranging from 0.1 to 0.39 is classified as weak relationship, while values ranging from 0.4 to 0.59 are considered as moderate; and values ranging from 0.6 to 0.79 were considered as strong; and finally values ranging from 0.8 to 1.0 are classified as very strong relationships (Field, 2013). Table 4.11 shows the results of Pearson Correlation (r).

# Table 4.11: Correlation results

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | Success of small scale fishery | Economic Challenges | Technological Challenges | Environmental Challenges |
| 1. Success of small scale fishery |  | 1 |  |  |  |
| Sig. (2-tailed) |  |  |  |  |
| N | 357 |  |  |  |
| 1. Economic Challenges | Pearson Correlation | 0.548 | 1 |  |  |
| Sig. (2-tailed) | 0.000 |  |  |  |
| N | 357 | 169 |  |  |
| 1. Technological Challenges | Pearson Correlation | 0.665 | 0.542 | 1 |  |
| Sig. (2-tailed) | 0.000 | 0.000 |  |  |
| N | 357 | 169 | 169 |  |
| 1. Environmental Challenges | Pearson Correlation | 0.756 | 0.497 | 0.530 | 1 |
| Sig. (2-tailed) | 0.000 | 0.000 | 0.000 |  |
| N | 357 | 169 | 169 | 169 |

Similarly, the finding of Pearson correlation revealed a modest relationship between EC and TC, as the correlation coefficient was 0.548 and the relationship was significant as evidenced by a p-value of 0.000. Similarly, the results showed a statistically significant and negative relationship (r = 0.665, p < 0.001) between the constructs EC and EnvC. Finally, the results showed a statistically significant correlation (r = 0.756, p < 0.001) between TC and EnvC; which implied that these are important items that measures success factors of fishery. The overall findings of Pearson Correlation (r) show that the variables are related to one another and there are no extreme values in their relationship because the r-values ranged between .548 and .746.

# Table 4.12 Regression Model Summary

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | F | Sig |
| 1 | .726a | .704 | .674 | 1.5121 | 24.402 | 0.001 |
| a. Predictors: (Constant), EC, TC, EnC, SSF | | | | |  |  |

The regression findings (Table 4.12) show that (R) value of 72.6% which confirms the relevance of independent variables into the regression equation. It also shows that R-Square of 70.4% and the adjusted R-Square is 67.4%. The adjusted R-square which is the most reliable explanation of the regression equation (Field, 2013); indicated that three independent variables (EC, TC and EnvC) combined explain the Challenges Facing Small Entrepreneurs in Fishery Sector. Standard Error of Estimate (ESS) is 1.5121 and F-test statistics is 24.402 which were significant at .000(p<0.001).

# Table 4.13 Regression coefficients summary

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| **B** | **Std. Error** | **Beta** |
| 1 | (Constant) | 2.331 | 1.404 |  | 4.600 |  |
| EC | -.271 | .066 | .251 | 1.450 | .000 |
| TC | -.359 | .038 | .511 | 1.521 | .000 |
| EnvC | -.418 | .057 | .210 | 2.211 | .000 |
| a. Dependent Variable: Success of Small-scale fishery | | | | | | |

Table 4.13 above shows the final regression analysis with three independent. Variables (EC, TC and EnvC); which were regressed against one dependent variable, namely Success of Small scale fishery. The findings show that the three variables are negatively related to the dependent variable SSSF, and the all the relationships were statistically significant. Below is the suggested regression equation after considering the three independent variables in the regression equation.

***+*** *έ*

*EC = Economic Challenges*

*TC = Technological Challenges*

*EnvC = Environmental Challenges*

*SSF = Success of Small-scale fish*

*έ = Error term*

The interpretation of the Regression equation above mean that if other variables are held constant, Success of Small-scale fish is 2.331 is supported by thethree (3) independent variables, namely EC, TC and EnvC. Thus, the regression equation shows a negative relationship between Economic Challenges (EC), Technological Challenges (TC), Environmental Challenges (EnC) and success of small scale fishery. Specifically, when other factors are held constant, EC (Economic Challenges) will negatively affect Success of Small-scale fish by .271, and the relationship is significant as p-value is .000. Similarly, when other factors are held constant, TC will be affecting Success of Small-scale fish by .359 and the relationship is negative and significant as p<0.001). Lastly,when other factors are held constant, Environmental Challenges (EC) were affecting Success of Small-scale fish by .418 and the relationship is negative and significant at .000 as (p<0.001).

### 4.12 Discussion of the findings

### 4.12.1 Economic Challenges (EC)

The study postulated that Economic challenges (EC) to have an impact on the Success of Small-Scale fishery (SSSF) in Muleba District. The descriptive statistics revealed a high mean value for the indicators of the construct of EC. The EC was measured by lack of capital, governments investment in fishing sector, inadequate and unrealizable fishing infrastructure and government support. The regression results therefore revealed that EC was negatively related to SSSF. Specifically, the results showed un-standardized beta values of -.271 which was significant at .000 (p < 0.001). These end results could be interpreted to imply that economic challenges are the contributing factors for the success of SMEs in fishery in the form of lack of investment in fishery sector, lack of adequate support from the government and inadequate infrastructure. These findings draw attention to policy makers to provide support to the sector which is mostly composed of youth whose majority did not make it through formal education as per the findings in the profile of the respondents. These findings are similar to the findings reported by Machumu (2018) and also the report by FAO (2022). The report found that fishing sector in African countries is mostly composed of low capital fishery who lack modern ways of doing businesses for better return in investment.

### 4.12.2 Technological Challenges (TC)

The Technological challenges (TC) facing the fishery sectors are mainly the lack of modern tools and techniques to do fishing activities and to maximize customer base and hence, improved output of the fishing sector. The descriptive statistics revealed a high mean value for the indicators of the construct of TC which implied that the construct TC was among the hindrances of success of small fishery in Muleba District. Meanwhile, the regression results therefore revealed that TC was negatively related to SSSF. Specifically, the results showed un-standardized beta values of -.359 and a t-value of 1.521 which was significant at .000 (p< 0.001). These end results could be interpreted to imply that technological challenges are the contributing factors for the success of SMEs in fishery in the form of lack of modern tools and techniques, lack of modern skills to use in fishing and also lack of proper fishing infrastructures which s conducive to drive the sector into a profitable sector for the SMEs. These findings are similar to the findings reported by Gaffin (2014) and also the report by Dei (2007) in Malawian context; who found that technological factors were important in the fishing subsector to enable them compete with other countries to make fishing contribute to the growth of a countries GDP growth.

### 4.12.3 Environmental Challenges (EnvC)

The study postulated that Environmental Challenges (EnvC) to have an impact on the Success ofSmall-Scale fishery (SSSF) in Muleba District. The descriptive statistics revealed a high mean value for the indicators of the construct EnvC with an overall mean value of .387. Similarly, the regression results revealed that EnvC was negatively related to SSSF. Specifically, the results showed un-standardized beta values of -.418 (41.8%) with a t-value of 2.211 which was significant at .000 (p < 0.001). These end results could be interpreted to imply that environmental challenges are the contributing factors as a hindrance in the success of SMEs in fishery in the form of lack of modern technological tools for fishing and conducive environment to conduct fishing activities. A report by FAO (2022) found that fishing sector in African countries is lagging behind due to environmental factors such as climatic condition which fluctuates and which affects the composition of fish in water.

### 4.13 Summary of the Chapter

The Chapter presented the analysis of data that was collected using a questionnaire of 357 respondents most of them were marine people dealing in fishing activities in Muleba District. The data was analyzed in descriptive (mean) and inferential statistics mainly correlation and regression. The findings revealed that the three variables were significant predictors of success in fishery sectors and the relationship was negative. The next Chapter is the conclusion, recommendation and suggestions for further studies.

### CHAPTER FIVE

### CONCLUSION AND RECOMMENDATION

### 5.0 Overview of the Chapter

This chapter is the last Chapter which presents a discussion on the conclusion and recommendations of the study. The chapter further provides summary of findings per each objective and presents the suggestions for future studies in this area of fishery which is still under-researched.

### 5.1 Summary of Findings

The purpose of this study was to examine challenges hindering business success of small scale entrepreneurs in fishery sector in Muleba District. The study advanced three specific objectives that aligned with the nature of fishery and specifically, the objectives were (i) to examine economic challenge hindering business success of small entrepreneurs in fishery sector in Muleba district, (ii) to examine environmental challenges hindering business success of small entrepreneurs in fishery sector in Muleba district and (iii) to examine technological factors hindering business success of small entrepreneurs in fishery sector in Muleba district. The study further put three hypotheses following the grounded literature review on the area. The results are presented per each hypothesis.

**5.1.1 H1: Economic challenges negatively affects small scale fishery in Muleba Distrct**

This hypothesis was tested using multiple regressions in the SPSS. The regression results therefore revealed that EC was negatively related to SSSF. Specifically, the results showed un-standardized beta values of -.271 which was significant at .000 (p < 0.001). These end results could be interpreted to imply that economic challenges are the contributing factors for the success of SMEs in fishery in the form of lack of investment in fishery sector, lack of adequate support from the government and inadequate infrastructure. These findings draw attention to policy makers to provide support to the sector which is mostly composed of youth whose majority did not make it through formal education as per the findings in the profile of the respondents.

**5.1.2 H2: Technological challenges negatively affects small scale fishery in**

**Muleba Distrct**

The regression results revealed that TC was negatively related to SSSF. Specifically, the results showed un-standardized beta values of -.359 and a t-value of 1.521 which was significant at .000 (p< 0.001). These end results could be interpreted to imply that technological challenges are the contributing factors for the success of SMEs in fishery in the form of lack of modern tools and techniques, lack of modern skills to use in fishing and also lack of proper fishing infrastructures which is conducive to drive the sector into a profitable sector for the SMEs.

**5.1.3 H3: Environmental factors negatively affects small scale fishery in Muleba**

**Distrct**

The study postulated that Environmental Challenges (EnvC) to have an impact on the Success of Small Scale fishery (SSSF) in Muleba District as was suggested in the literature. The regression results revealed that EnvC was negatively related to SSSF. Specifically, the results showed beta values of -.418 with a t-value of 2.211 which was significant at .000 (p < 0.001). These end results imply that environmental challenges are the contributing factors as a hindrance in the success of SMEs in fishery in the form of lack of modern technological tools for fishing and conducive environment to conduct fishing activities.

### 5.2 Conclusion

Fishery sector is one of the sectors that are relied mostly by people mainly youth with low income and low level of formal education. Especially in Muleba District, the sector has remained stagnant in economic development and hence contributes far below its capacity in the poverty reduction and also contributes less in the GDP. This study identified the need to identify teh major challenges and to take advantage of the geographical location of Muleba, the study collected sufficient data with the help of research assistants. A total of 357 respondents filled in the questionnaire which was translated in Kiswahili. The findings revealed that the success of small scale fishery in Muleba District was mainly contributed by economic challenges, technological challenges and also environmental challenges. These findings draw attention to policy makers to put emphasis on these variables and their sub-indicators so as to support the small scale fishery in their activities so as to reach their maximum potential in economic activies so as to foster growth in household income.

### 5.3 Limitations of the study

This study has two major limitations. The first limitation is the focus on one District of Muleba, which might not be s representative of the whole region. The second limitation is the lack of talking data in form of interviews so as to get explanations from one person to another. It should be known that Muleba has its own set of geographical problems which if this study was conducted through qualitative research design, it could be enhances in understanding the specific challenges in Muleba context.

### 5.4 Suggestions for further studies

This study has focused on general challenges in form of economic, environmental and technological challenges so as to know holistic measures in macroeconomic levels which can be applicable in other regions in Tanzania. Future studies should focus in examining individual factors such as only technological factors independently or environmental factors independently so as to dig deeper on each of the construct separately.

Similarly, as pointed above, this study used a positivist research philosophy which believes more in numbers. Of course this was deemed the ideal philosophical stance to sue because the fishery sector had a large population and the researcher intended to reduce bias by focusing on random sampling technique in data collection. This has its own set of limitations. Future studies should focus on using a mixed method research design by applying both qualitative and quantitative research designs. By doing so, new themes could emerge which will create more variables on the area of success factors in the fishery sector.

**5.5 Recommendation**

These findings are important in two ways; first the study extends knowledge in fishery in an area which has been less studied. Second, the study is useful to various policy makers in the government especially in marine sector and aquatic animals especially to know where support is needed to improve the fishery sector.

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### APPENDICES

**SECTION A: PERSONAL PROFILE**

**[1] What is your gender?**

* Female
* Male

[2] Please specify your age group:

* 18-24 years
* 25-34 years
* 35-44 years
* 45-54 years
* 55 years and above

**[3] What is your position in fishing?**

* Fishermen
* Boat builders
* Aquaculture
* Net menders
* Fish seller
* Local government officer

**[4] How many years have you been working in fishing sector?**

* 0-5 years
* 6-10 years
* 11-15 years
* 16-20 years
* 21 years and above

**[5] What is your College education level?**

* Never gone to school
* Primary Education
* O-Level
* A-level
* Certificate
* Diploma
* Degree
* Master
* PhD
* Other................................................................................

**SECTION B: CLOSE ENDED QUESTIONS**

**6. Please indicate the degree to which you agree with the following factors for job satisfaction.**

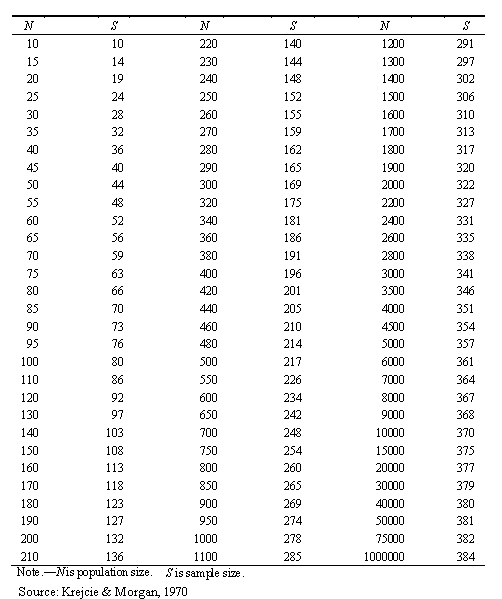
|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **EC** | **Economic challenges hindering success of fishing activities** | **Strongly Disagree [1]** | **Disagree[2]** | **Neutral[3]** | **Agree[4]** | **Strongly Agree[5]** |
| EC1 | I face several economic challenges in fishing activities |  |  |  |  |  |
| EC2 | But all of the challenges are left un solved |  |  |  |  |  |
| EC3 | Some challenges are resolved by the government |  |  |  |  |  |
| EC4 | Lack of capital hinder my activities |  |  |  |  |  |
| EC5 | Fluctuation of market for fishery product affect me |  |  |  |  |  |
| EC6 | There is international competition that affect my activities |  |  |  |  |  |
| EC7 | Poor government investment in this sector affect me |  |  |  |  |  |
| EC8 | There is no supportive fishing infrastructure |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **EnC** | **Environmental challenges hindering success of fishing activities** | **Strongly Disagree [1]** | **Disagree[2]** | **Neutral[3]** | **Agree[4]** | **Strongly Agree[5]** |
| EnC1 | I face several environmental challenges in fishing activities |  |  |  |  |  |
| EnC2 | But all of the challenges are left un solved |  |  |  |  |  |
| EnC3 | Variations in wind speed and directions has negative impacts in fishing |  |  |  |  |  |
| EnC4 | There is climatic changes that affect our business |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **TC** | **Technological challenges hindering success of fishing activities** | **Strongly Disagree [1]** | **Disagree[2]** | **Neutral[3]** | **Agree[4]** | **Strongly Agree[5]** |
| TC1 | There are several technological challenges that hinder fishing activities |  |  |  |  |  |
| TC2 | Post -Harvest Losses is greater and affect our business |  |  |  |  |  |
| TC3 | There is no storage facilities to fishery products |  |  |  |  |  |
| TC3 | There is By-Catch problem facing our activities |  |  |  |  |  |

### APPENDIX-2

**Table for Determining Sample Size for a Finite Population**



**Comments by Supervisor:**

**…………………………………………………………………………………………**

***I CONFIRM THAT THIS PROPOSAL IS SATISFACTORY AND THE STUDENT IS ALLOWED TO PROCEED TO COLLECTION STAGE***

***…………………………………………………………………………………………***

**…………………………………………………………………………………………**

**Name of Supervisor: Dr. Asha Katamba……Signature** **…Date: 20/11/2023**

