

UNIVERSITY OF CAPE COAST

FINANCIAL LITERACY, MICROFINANCE, AND PERFORMANCE  
OF ARTISANAL FISHERMEN IN ELMINA FISHING COMMUNITY

MARY ABRA AMENUKU

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ARTISANAL FISHERMEN IN ELMINA FISHING COMMUNITY

BY

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Thesis submitted to the Department of Finance of the School of Business, College of Humanities and Legal Studies, University of Cape Coast, in partial fulfillment of the requirements for the award of Master of Commerce degree in Finance

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## DECLARATION

### Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature ..... Date .....

Name: Mary Abra Amenuku

### Supervisors' Declaration

I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature ..... Date .....

Name: Mr. Patrick K. Akorsu

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## ABSTRACT

The growth of Ghana's fishing sector has been spectacular in the past years leading to the sector generating more than GHS1 billion in revenue annually and accounting for 4.5 percent of Ghana's GDP while creating employment for about 210,000 people directly in the sector. However, the financial literacy of the fishing community in Ghana is reported to be low with an unimpressive performance. The study investigated the relationship between financial literacy, microcredit, and performance of artisanal fishermen in Elmina fishing community of Ghana by employing Partial Least Square Structural Equation Modeling. A survey of 214 randomly sampled fishermen was conducted using a standard questionnaire to provide empirical answers to the underlying questions of this study. The study showed that there is a positive effect of financial literacy on financial well-being. The results further indicated that fishermen with poor financial knowledge and financial wellbeing lead to their inability to acquire credit facilities from microcredit institutions. Regression estimation results reveal that there is a positive and significant effect of financial behaviour on the performance of fishermen. The study recommended that the Ministry of Fisheries should put in place programmes that will improve the financial education of fishermen.

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## DEDICATION

To my family and friends.

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## CHAPTER ONE

### INTRODUCTION

Ghana's fishing activities had dwindled from 120,000 metric tonnes to 30,000 tonnes (United States Agency for International Development (USAID, 2015)) within the last ten years, and the question posed is why this dwindling? Probably, this decline could be linked to lack of expansion which might be due to lack of access to financing. Literature remains silent on how these developments in modernizing the sector reflecting the same propensity in the line of the traditional fishermen fishing activities. This has necessitated the study of the relationship between financial literacy, microfinance, and performance of artisanal fishermen in Elmina fishing community.

#### **Background to the Study**

Agriculture plays a vital role in providing food to the population and supplies other industries with raw materials for production of goods and services (Food and Agriculture Organization, 2009). Agricultural growth in Ghana has been more rapid than the growth of non- agricultural sectors in recent years, expanding by an average of 5.5 per cent compared to 5.2 per cent in the economy. (Bogetic, Bussolo, Ye, Medvedev, Wodon & Boakye, 2007).

In Ghana, the fisheries sector occupies an important component of agriculture. This has led to the creation of a separate ministry called the Ministries of Fisheries and Aquaculture Development (MoFAD). It has been recognized as a powerful income and employment generator as it stimulates the growth of several subsidiary industries and serves as a source of cheap and nutritious food besides it

being a source of foreign exchange earner (Perveen, Kishor & Mohanty, 2014). However, the fisheries industry faces some challenges such as inadequate fisheries regulations, lack of implementation or enforcement of the regulations, lack of transparency and traceability and too few no-go areas of fishing just to mention a few.

Since the 1970s, microfinance has become a popular and key development tool to alleviate poverty across the globe (Roodman & Morduch, 2014; Duflo, Banerjee, Glennerster & Kinnan, 2010). A rapidly expanding number of microfinance institutions have eroded the Ghanaian economy in the early 1990s and has then gone through the four distinct phases that it faces worldwide. Microfinance aims to protect incomes and empower specific sections of the population. In the context of Ghana, microfinance is seen as the tradition of the people saving and/or taking small loans from individuals or groups with the context of self- help to start a business or to expand an existing business.

Like most countries, small scale fishing is taken to be one of the most disadvantaged and vulnerable groups. Microfinance programmes are means for these households to gain access to needed financial services that are appropriate for their needs. Moreover, the development objective of the microfinance for poor, small scale fishing is to enable them to increase their income, smoothen consumption and develop micro-enterprises, manage risk better and enhance their earnings capacities, thereby reducing their economic and social vulnerabilities (Perveen et al, 2014). It is worth to know that microfinance institutions can take the form of government, non- profit and for-profit institutions and can specialize in or

bundle services industry credit savings, insurance and capacity-building (Roodman & Morduch, 2014). Regardless of the approach used, microfinance institutions ultimately seek to deliver financial services to the poor in a manner that maximizes the number of households reached maintaining institutional sustainability (Roodman & Morduch, 2014).

In addition, literature has indicated that there are two constructs that might explain variance in individuals getting access to microfinance: lending terms which include collaterals, loan repayments periods and interest rate (Safavian, Fleisig & Steinbuks, 2006) and financial literacy (Hilgert, Hogarth & Beverly, 2003). Financial literacy is explained as the ability to make informed judgments and to take effective decisions regarding the use and management of money (Beal & Delpachitra, 2003 Australia and New Zealand (ANZ) report, 2003). Like other countries, Ghana as a developing country faces the challenge of having most of the citizens being financial illiterates as a result of the low level of education among the citizens (Atakora, 2013). The fishermen in the fishing sectors engaging in the artisanal fishing as most of the people engaging in them have little or no education. (Atakora, 2013) indicates that traders with a high level of education display higher financial literacy level than non-educated ones.

However, sceptics (Alex & Amos, 2014) question the effectiveness of financial education in improving financial literacy. The gross effect of the situation described above is that most of the fishermen engaging in artisanal fishing production are financial illiterates as a result of the lower level of education, resulting in the inability of these fishermen to access credit services from

microfinance institutions and generally is affecting the growth of the artisanal fisheries sub-sector.

### **Statement of the Problem**

The growth of the fishing sector has been spectacular in the past years leading to the sector generating more than GHC 1 billion in revenue annually and accounting for 4.5 per cent of Ghana's GDP while creating employment for about 210,000 people directly in the sector (United States Agency for International Development (USAID, 2015)). Again, the sector experienced a steady gradual growth from GHC1, 279,000 in 2014 to GHC1, 349,000 in 2015 resulting in growth rate of 5.47% (Ghana Statistical Services, 2011) However, within ten years, Ghana's peak catch of fish had dwindled from 120,000 metric tonnes to 30,000 tonnes (USAID, 2015) and the question posed is why this dwindling? Probably, this decline could be linked to lack of expansion which might be due to lack of access to financing. Invariably, major developments have been taking place in modernizing the sector as the highly profitable fishing sector offers great scope for overall development and growth for the national economy. However, such development hasn't reflected in the performance of artisanal fishermen. Literature remains silent on how these developments in modernizing the sector reflecting the same propensity in the line of the traditional fishermen.

Food Agricultural Organization estimated that 5.8 million fishers can be considered as poor as they earn less than \$1 per day and 90% of these fishers are traditional fishermen. In Ghana, the artisanal sector of the industry accounts for over 70% of annual marine fish production and yet most of them have nothing good

to write home about (Mensah & Koranteng, 1988). The traditional fishermen or the artisanal fishermen mostly come from the weaker section of the population. They are considered socially, economically and educationally backward because they lack financial credits, organizational capacity and ability to adapt to the fast-moving modern world's positive and negative factors (Perveen et al, 2014). Though there is a large network of banks and other financial institution in Ghana, they are less inclined to give loan to artisanal fishermen due to the lack of collateral security and other reasons and as a result lack access to financial facilities.

In a global perspective, although numerous works have been done on microfinance and growth (Sulemana & Adjei, 2015; Mensah, 2012; Perveen et al, 2014), there are limited works done on financial literacy, microfinance and growth of artisanal fisheries. For instance, Sulemana and Adjei (2015) looked at microfinance impact on agricultural production in developing countries without placing much attention on the impacts of microfinance on fishermen. Again, the sample size used was 30 which is too small to make a generalization, therefore, the new study will increase the sample size for a better generalization out of it and finally the study did not take into consideration the financial literacy levels of the fishermen. Again, Mensah (2012) also conducted a study to look into the optimization of profits in the artisanal marine fishing which she used an algorithm for profit maximization as a research design but the research under construction will look at how these fishermen are able to access microfinance to enhance their business before arriving at their profit. Also, Guntur District in India, (Perveen et al, 2014) conducted studies on the empowerment of fishermen through



microfinance. His research was basically on microfinance and empowerment without looking at the financial literacy of the fishermen.

It is these gaps in the literature that have necessitated the current study on financial literacy, microfinance and performance of artisanal fishermen in the Elmina fishing communities.

### **Purpose of the Study**

The main purpose of the study was to conduct research on financial literacy, access to microfinance and performance of the artisanal fishing industry in Elmina.

### **Research Objectives**

The research will be guided by the following research objectives to:

1. Assess the financial knowledge level among artisanal fishermen in the Elmina community.
2. Evaluate artisanal fishermen's access to funds from microfinance institutions.
3. Examine the effect of financial literacy and access to finance on the financial wellbeing of the artisanal fishermen in Elmina.
4. Examine the effect of financial literacy and financial wellbeing on access to finance of the artisanal fishermen in Elmina.
5. Examine the effect of financial literacy, financial wellbeing and access to finance services on performance of the artisanal fishermen in Elmina.

### **Research Question**

1. What is the financial knowledge level of fishermen in the Elmina fishing communities?
2. What is the level of access to finance services of fishermen in the Elmina artisanal fishing industry?

### **Research Hypotheses**

#### **Model 1:**

H1: Financial behaviour positively influences the financial wellbeing of fishermen

H2: Financial knowledge positively influences the financial wellbeing of fishermen

H3: Access to finance positively influences the financial wellbeing of fishermen

H4: Financial performance positively influences the financial wellbeing of fishermen

#### **Model 2:**

H5: Financial behaviour positively influences access to finance of fishermen

H6: Financial knowledge positively influences access to finance of fishermen

H7: Financial wellbeing positively influences access to finance of fishermen

H8: Income level positively influences access to finance of fishermen

H9: Firm size positively influences access to finance of fishermen

#### **Model 3**

H10: Financial behaviour positively influences the performance (sales) of fishermen

H11: Financial knowledge positively influences the performance (sales) of fishermen

H12: Financial wellbeing positively influences the performance (sales) of fishermen

H13: Income level positively influences the performance (sales) of fishermen

H14: Access to finance positively influences the performance (sales) of fishermen

### **Significance of the Study**

The study will help training institutions in understanding the significance of financial literacy to the performance of SMEs in the artisanal fishing sector. It will also help academicians in establishing the relevance of curriculum taught in business schools to the actual business world. Considering that the vast majorities of SMEs are in the informal sectors where SMEs has no or only have basic education, the government policymakers will find out whether the basic financial education taught in school has any bearing to SMEs performance. The study will further establish whether there is a need for financial literacy programs amongst SMEs in a bid to stimulate growth in the sector.

### **Organization of the Study**

The study is grouped under five chapters. Chapter one started with the general introduction of the study which includes the background, statement of the problem, the objectives of the study, research questions, hypotheses, significance of the study, delimitation, limitations and organization of the study. Chapter two reviewed related studies and literature. That is, the various models and theories written on the relationship between financial literacy, microfinance, and performance were discussed. Chapter three focused on the research methods while

chapter four covered the presentation and analysis of the data collected. The summary, findings, conclusions and recommendations of the study were presented in chapter five.

### **Conceptual Definition of Financial Literacy**

One of the striking things about the literature is that financial literacy has been variably defined as (a) a specific form of knowledge, (b) the ability or skills to apply that knowledge, (c) perceived knowledge, (d) good financial behaviour, and even (e) financial experience.

Hilgert et al., (2003) conceptualized Financial Literacy as Financial knowledge. Financial Industry Regulatory Authority-FINRA (2003) also explained financial literacy as the understanding ordinary investors have of market principles, instruments, organizations and regulations. According to Hung, Parker and Yoong (2009) “Individuals are considered financially literate if they are competent and can demonstrate they have used the knowledge they have learned. Financial literacy cannot be measured directly so proxies must be used.

Literacy is obtained through practical experience and active integration of knowledge. As people become more literate, they become increasingly more financially sophisticated and it is conjectured that this may also mean that an individual may be more competent” (p. 29). National Council on Economic Education (NCEE, 2005) explained financial literacy as individuals been familiarize with basic economic principles, knowledge about the U.S. economy, and understanding of some key economic terms. Schagen, (2007) conceptualized financial literacy as the ability to make informed judgements and to take effective

financial literacy as having knowledge of basic financial concepts, such as the working of interest compounding, the difference between nominal and real values, and the basics of risk diversification.

## CHAPTER TWO

### LITERATURE REVIEW

#### **Introduction**

The focal point of this chapter reviews some relevant literature on, conceptual empirical and theoretical frameworks. The chapter presents conceptual definitions of financial literacy, access to finance and performance. The empirical framework covers the relationships among financial literacy, access to finance and performance. The chapter further considers theoretical frameworks.

#### **Theoretical Review**

The theories underpinning the study are the prospect theory and financial literacy theory.

#### **Prospect Theory**

The proponents of this theory established in 1979 were Daniel Kahneman and Amos Tversky. They argued that investors value gains and losses differently and make choices depending on perceived gains rather than losses. This means that, for an investor to put in money in a project, he or she makes the decision based on what he or she has perceived to produce gains or losses. The theory further stipulates that investors are not always rational and make decisions based on their risk attitudes. Kahneman and Tversky, (1979) posit that the investor evaluates the prospective gains and losses before making the decision and avoids making losses to protect their investments. The risk attitudes of the investors are believed to have been influenced by their prior experience with similar investments and their sound

interpretation to that event (Lepori, 2010). The researchers further opine that investor's risk attitudes towards gains are different compared to their risk attitudes towards losses. They state that according to investors, losses are perceived to carry more weight than equivalent gains and that investors will take more risks to avoid losses than take a little risk to achieve an equivalent gain.

The prospect theory reveals that the decision to invest in a project depends on their perceived gains to be derived from the investment. This presupposes that when there are perceived losses to be derived from a project, then the investment in such a project will be curtailed. The theory, therefore, suggests that when there is a wrong perception about the project, then the decision of investing in the project will be wrongly influenced. Roszkowski & Davey (2010) and Lepori (2010) posit that perception and attitudes towards an event are influenced by prior experience. This buttress literature to the theory explains that when a prior experience is wrongly analysed, the investment decision of the investor is uninformed. This suggests that the financial knowledge of the investor in understanding the prior experiences is a useful element in the investment decisions.

Prospect theory is relevant to this study as it can support the importance of financial literacy to help in making sound financial decisions. Financially literate investors can assess the relationship between risk (e.g. debt) and return and choose the alternative that gives the best outcome.

### **Financial Literacy Theory**

A Theoretical Framework for Financial Literacy is the conventional microeconomic approach to saving and consumption decisions posit that a fully

rational and well-informed individual will consume less than his income in times of high earnings, thus saving to support consumption when income falls (e.g., after retirement). This approach was started with Modigliani and Brumberg (1954) and Friedman (1957), the consumer is posited to arrange his optimal saving and decumulation patterns to smooth marginal utility over his lifetime.

Financial literacy theory is considered a key model under a microeconomic approach. The Financial literacy theory is an emerging theory that draws theoretical perspectives from other theories including economics, psychology, sociology and management to explain the financial behaviour of individuals. Financial literacy as a construct was first championed by the Jumpstart coalition for personal financial literacy in its inaugural study of financial literacy among high school students (Sarigül, 2014). As operationalized in academic literature, financial literacy is a multi-dimensional construct comprising of knowledge of financial products, knowledge of financial concepts, having the mathematical skills or numeracy necessary for effective financial decision making and financial behaviour such as financial planning (Wise, 2013).

Early literature on financial literacy began by documenting important links between financial literacy and several economic behaviours such as money management, debt and saving behaviours, retirement planning, asset ownership and participation in financial markets (Van Rooij, Lusardi & Alessie, 2011). Economic psychologists posited that factors associated with retirement saving and asset ownership behaviours are both economic and psychological (Chien & Devaney,



2001). Several behaviour theories have also been used in the study of financial literacy and financial behaviours.

Theoretical models incorporating such key aspects of consumer behaviour and the economic environment implicitly assume that people are able to formulate and execute saving and spend-down plans, all of which require expertise in dealing with financial markets, knowledge of purchasing power, and the capacity to undertake complex economic calculations. In reality all over the world, very few people possess extensive financial knowledge conducive to making and executing complex plans. Moreover, acquiring such knowledge is likely to come at a cost unlike the past where financial decisions like retirement pensions were implemented and managed by governments, individual workers tended to devote little attention to the plan details.

Empirically, few authors have used the financial literacy theory to explore the decision to acquire financial literacy and the links between financial knowledge, saving, and investment behaviour (Delavande, Rohwedder & Willis, 2008; Bottazzi, Jappelli & Padula, 2011; Hsu, 2011; Lusardi, Michaud & Mitchell, 2013). For instance, Bottazzi, Jappelli and Padula (2011) consider a two-period model but additionally sketch a multi-period life cycle model with financial literacy endogenously determined. They predict that financial literacy and wealth will be strongly correlated over the life cycle, with both rising until retirement and falling thereafter. They also suggest that, in countries with generous Social Security benefits, there will be fewer incentives to save and accumulate wealth and, in turn, less reason to invest in financial literacy.

Using this theoretical model, this study seeks to offer an assessment of how artisanal fishermen are well-equipped to make complex financial decisions. Specifically, this theory will aid to focus on *financial literacy*, by which artisanal fishermen ability to process economic information and make informed decisions about financial planning, wealth accumulation, pensions, and debt. Also, recent theoretical research showing how financial knowledge can be cast as a type of investment in human capital. Endogenizing financial knowledge in this way has important implications for welfare and offers insights into programs intended to enhance levels of financial knowledge in the larger population especially artisanal fishermen. Another goal is to assess the effects of financial literacy on the behaviour of performance as well as access to finance. This is done when the study establishes how much (or how little) people know and which subgroups are the least financially literate. Most importantly, we evaluate the impact of financial literacy on economic decision-making in the Komenda Edina Eguafo Abirem and what policies might help fill these gaps.

In the assessment of financial literacy theory, it provides policymakers with deep concern about the widespread lack of financial knowledge. It aimed to fill the gaps with specific programs to “identify individuals who are most in need of financial education and the best ways to improve that education” (Organisation for Economic Co-operation and Development (OECD), 2012). However, while there is a substantial theoretical and empirical body of work on the economics of education (Glewwe, 2002; Hanushek & Woessmann, 2008), far less attention has been devoted to the question of how people acquire and deploy financial literacy.

Each of these studies represents a useful theoretical advance, yet none incorporates borrowing constraints, mortality risk, demographic factors, stock market returns, and earnings and health shocks, all now standard in theoretical models of saving. These shortcomings are rectified in the multi-period model of Lusardi et al. (2011, 2013), who calibrate and simulate a dynamic life cycle approach where individuals not only select capital market investments but also undertake investment in financial knowledge.

Despite policy agreement on the need to fill these gaps, analysts and policymakers have much to learn about the most cost-effective ways to build financial knowledge in the population at large. The literature to date has shown that many people around the world are financially illiterate, as we have sketched here. Econometric models and experiments have done much to confirm the causal impact of financial literacy on economic decision making and to separately identify this effect from other factors, including education and cognitive ability. Research on efforts to enhance financial literacy suggests that some interventions work well, but additional experimental work is critical to control for endogeneity and confirm causality.

First, theoretical models of saving and financial decision making must be further enriched to incorporate the fact that financial knowledge is a form of human capital. Second, efforts to better measure financial education are likely to pay off, including gathering information on teachers, training programs, and the material covered. Third, outcomes beyond what has been studied to date are likely to be of interest, including borrowing for student loans, investment in health, reverse

mortgage patterns, and when to claim Social Security benefits decisions that all have far-reaching economic consequences.

## **Conceptual Review**

### *Financial Literacy*

Hilgert et al., (2003) conceptualized Financial Literacy as Financial knowledge. Also, financial literacy has been variably defined as a specific form of knowledge, the ability or skills to apply that knowledge, perceived knowledge, good financial behaviour, and even financial experiences (Hung et al., 2009). Financial Industry Regulatory Authority -FINRA (2003) further explained financial literacy as the understanding ordinary investors have of market principles, instruments, organizations and regulations.

National Council on Economic Education (NCEE, 2005) explained financial literacy as individuals been familiarize with basic economic principles, knowledge about the economy, and understanding of some key economic terms. Similarly, Schagen, (2007) conceptualized financial literacy as the ability to make informed judgements and to take effective decisions regarding the use and management of money. Moreover, Lusardi (2008) defined financial literacy as having knowledge of basic financial concepts, such as the working of interest compounding, the difference between nominal and real values, and the basics of risk diversification. Likewise, Lusardi and Tufano (2015) emphasized on managers' ability and decision-making aspect of financial literacy. They target a form of financial literacy–debt literacy.

Moore (2003) goes far as including practical experience, on the contention that it provides the basis for knowledge and other faces of financial literacy. In the present paper, financial literacy is conceptual of how firms manage and strategize financial knowledge, which significantly affects decision makers' behaviours, awareness and attitudes, concerning sound decision making and eventually achieving organizational performance. According to Moore (2003) "Individuals are considered financially literate if they are competent and can demonstrate they have used the knowledge they have learned. Financial literacy cannot be measured directly so proxies must be used. Literacy is obtained through practical experience and active integration of knowledge. As people become more literate, they become increasingly more financially sophisticated and it is conjectured that this may also mean that an individual may be more competent".

Financial literacy as enough knowledge about facts on personal finances and is the key to personal financial management (Garman & Forgue, 2002). Their study likewise reviews the lack of knowledge in personal finance, intricate financial situations, in addition to a large range of choices for making decisions on financing, and time constraints on learning about personal finance which is a barrier to financial literacy.

Many researchers have defined financial literacy in many studies in the area of personal finance; many have failed to define the concept of financial literacy properly because it does not capture the manager and the businesspeople. Gitman (2003) outlined financing provision and indicates that financial service is the section that will include the delivery of financial products to individuals. Financing

literacy is listed as one of the critical managerial competencies in SMEs firm and development (Eniola & Entebang, 2016).

Most scholars agree that entrepreneurs, regardless of their age, are consistently engaged in decision-making activities concerning resource procurement, allocation and utilization. Such activities almost always have financial consequences and thus, in order to be effective, entrepreneurs must be financially literate (Oseifuah, 2010). There is the only reference made to the importance of managing money and the author only describes the management process of individual households, but there is no clear description of SME owners/manager financial literacy.

However, there are definitions of financial literacy specifically addressed to managers and businesspeople. A financially literate SME owner/manager was defined as someone that knows what are the most suitable financing decisions on the business performance at the various growth stages of the business; knows where to obtain the most suitable products and services; and interacts with confidence with the suppliers of these products and services (USAID, 2015).

#### *Firm Performance(sales)*

The concept of performance in relation to SMEs, particularly, the definition of performance will be discussed. Performance may have two strategic outcomes that are often referred to in the literature as firm success or failure (Eniola & Entebang, 2015). In the management field, firm performance can be interpreted as measures of good or indifferent management (Sefiani & Bown, 2013), but it may occur to other reasons such as luck.

Firm performance is a focal phenomenon in business management. It has been proposed in the literature (Barney, 2002). The general performance of the organization depends on the correct management at the three levels of management (Eniola & Entebang, 2015). Performance can be characterized as the firm's ability to create acceptable outcomes and actions. However, performance seems to be conceptualized, rationalized and measured in different ways, thus making cross-comparison difficult.

According to Eniola and Entebang (2015), performance is commonly employed as an index of a firm's health over a dedicated period. This puts performance as one of the key issues of SMEs. The capacity to institute changes in the management of perceived market opportunities, adapting to the environment, and possessing certain managerial factors, product innovations, creativity, proactiveness, technological change, networking, are all critical factors to bringing about strategic improvement in firm performance. Performance encompasses various meanings, including growth, survival, success and competitiveness. Performance can be characterized as the firm's ability to create acceptable outcomes and actions (Eniola & Entebang, 2015).

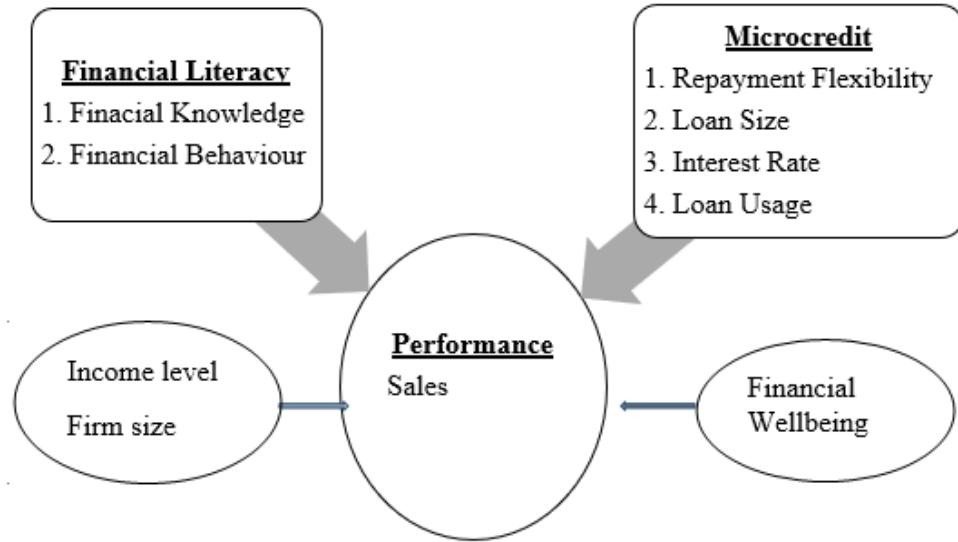
#### *Financial Access*

Financial access is defined as the ability of individuals, households, entrepreneurs and firms to access and utilize a range of financial services if they choose to do so (Rojas-Suarez & Gonzales, 2010). Financial access is an important determinant of the performance of microenterprises as it provides them working capital, fosters greater firm innovation and dynamism, enhances entrepreneurship,

promotes more efficient asset allocation and enhances the firm's ability to exploit growth opportunities (Beck, Demirgüç-Kunt & Maksimovic, 2006). Providing broad access to finance for deserving firms has a significant impact on economic growth.

When enterprises have limited financial access economic and social opportunities are restricted, enterprise creation and growth are restrained, households and enterprises are more vulnerable to threats, and payments are costlier and less safe (Rojas-Suarez et al, 2010). Financial access enhances financial inclusion thereby contributing to financial sector deepening and overall economic growth. Financial inclusion aims at drawing the unbanked population into the formal financial system to enable them to access a wide range of financial services including savings, payments, money transfers and credit and insurance (Hannig et al, 2010). Financial inclusion of small firms reduces liquidity constraints, encourages investment which in turn influences the industrial structure, firm size, and competition in an economy (Beck, et al, 2006). Financial inclusion also leads to financial deepening, which drives investment, growth, poverty reduction and total factor productivity in the economy (Atkinson, 2014). Common measures of financial access include account ownership, utilization of a variety of financial services and ability to obtain services from various financial service providers.





**Figure 1: Conceptual Framework**

**Relationship between financial literacy and performance**

Financial literacy has attracted interest from scholars and policymakers. In the past few years, scholars have increased their efforts in conducting research related to financial literacy and have also documented the relationship between financial literacy and financial decision making (Lusardi & Mitchell, 2011; Hung et al., 2009). A major conclusion of most of these studies suggests a strong positive association between financial literacy and financial outcomes. Further, recent empirical evidence suggests a strong correlation between financial literacy and behaviour (Cole, Sampson & Zia, 2009) and that an important determinant of stock market participation is financial literacy (Van Rooij, Lusardi & Alessie, 2011). For example, the literature suggests that individuals with more financial knowledge are more likely to engage in a wide range of recommended financial practices (Hilgert et al., 2003). Similarly, Stango and Zinman (2007) contended that individuals who are unable to correctly calculate interest rates out of a stream of payments end up

borrowing more and accumulating lower amounts of wealth. Thus, financial literacy is a significant tool for managing business finance (Miller, Godfrey, Levesque & Stark, 2009). For example, financial literacy enables investors to evaluate and compare financial products, such as bank accounts, saving products, credit and loan options, payment instruments, investments, insurance coverage, so as to make optimal decisions (Miller et al., 2009). Accordingly, Hilgert et al., (2003) contended that financial knowledge directly correlates with self-beneficial financial behaviour. It is can be argued that stronger financial knowledge is relevant in overcoming difficulties in accessing and managing credit markets. For example, financial literacy can facilitate the decision-making processes such as payment of bills on time, proper debt management which can improve the creditworthiness of potential borrowers to support firm performance.

### **Relationship between financial literacy, financial capital availability and firm performance (Sales)**

Possessing adequate financial knowledge may not necessarily translate into the firm performance as financing is an essential part of operating any firm. Without adequate access to financing, the operating power of the firm and its potential for growth is at risk. The growth and performance of small firms also depend on the type of and amount of resources controlled by or made available to it (Wiklund & Shepherd, 2003). Access to finance is particularly important in realizing business objectives such as growth and performance (Sexton and Bowman-Upton, 1991). In the entrepreneurship and small business literature, lack of access to finance has been associated with entrepreneurs' inability to

achieve their objectives (Beck & Demirguc-Kunt, 2005; Hutchinson & Xavier, 2006; Malo & Norus, 2009; Robson & Obeng, 2008; Coad & Tamvada, 2012) and restrict owner-managers' opportunities to take action (Wiklund & Shepherd, 2003).

Financial capital availability enhances the pursuit of resource-intensive growth strategies because slack resources can be tailored to new strategies and practices, which in turn can allow the firm to pursue new growth opportunities as financial capital availability influences firm growth and performance (Storey, 2016). Thus, access to sources of financing may play the twin roles of proxying for (internal) financial capacity as well as providing a signal about the quality of future growth opportunities, in turn, reducing the external financing constraints for firms facing informational problems. We argue that financial resource availability can underpin the effective implementation of entrepreneurial and financial management plans by allowing firms to access finance that may be more demanding in terms of collateral requirements but that also have a better chance of succeeding. Accordingly, financial resource availability is likely to enhance the relationship between financial literacy and firm performance, such that the association is more strongly positively related to performance under high levels of financial literacy.

### **Relationship between access to finance and performance**

Financial literacy influences financial access which in turn influences the performance of microenterprises. Access to finance is a key determinant for business start-up, development and growth of microenterprises (World Bank, 2008). Finance not only facilitates market entry, growth of companies and risk reduction, it also promotes innovation and entrepreneurial activity and investment

in high-return investment projects (World Bank, 2008). However, in many developing countries, majority of informal businesses have limited access to financial services and while many factors contribute to this, lack of financial literacy has been identified as one of the factors that limit financial access (OECD, 2012). Studies have established that financial literacy influences access to financial services and the performance of microenterprises. In a study on the effect of finance on the performance of microenterprises in Sri Lanka, Del Mel, McKenzie and Woodruff (2008) established that financial literacy improved the usage of financial products by the enterprises, which in turn improved their performance. Nunoo & Andoh (2012) studied the utilization of financial services by SMEs in Ghana and confirmed that financially literate entrepreneurs were more likely to access and utilize financial services which in turn improved the performance of their enterprises. Wachira *et al* (2012) also established that financial literacy influences financial access and that this had a negative influence on the performance of small enterprises in Kenya.

Microcredit financings are inputs into fishery activities. If the factors limiting access to financing are eliminated, it is hoped that the funds will be available for use by fishermen in fishing activities. Proper use of these funds for example in purchasing the more efficient fishing equipment will result in greater harvesting. The fishermen will, therefore, earn more from the sale of their catch. Part of this earning can be reinvested for a further increased income from fishing (Matiya, Wakabayashi, Ng'ong'ola, & Takenouchi, 2005).

## **Empirical Review**

The following section reviews literature that is related to financial literacy levels of fishermen, the relationship between financial literacy and access to finance of the artisanal fishermen, the relationship between financial literacy and performance of the fishermen and the relationship between access to funds from microfinance institutions and performance of the fishermen. The review shows the gaps that the current study aimed at filling.

### **Financial Literacy level of fishermen**

Financial literacy by artisanal fishermen has been analyzed in different studies. (Wachira & Kihiu, 2012) analyzed the impact of financial literacy on access to financial services in Kenya using the 2009 National Financial Access (Fin Access) survey data. Using a multinomial logit approach to explain the four major financial service access strands, the study found that financial literacy remains low in Kenya. Besides, regression results indicate that households' access to financial services is not based on levels of financial literacy but rather on factors such as income levels, distance from banks, age, marital status, gender, household size and level of education. However, the study established that the probability of a financially illiterate person remaining financial excluded is significantly high calling for increased investment in financial literacy programs to reverse the trend.

Hidajat (2015) analyzed financial literacy literature that suggested that people in many countries were financially illiterate. Even though financial literacy had quoted mostly in many types of research, this concept rarely examined on the population group of fishermen. The purpose of this study was to examine their

personal financial literacy and the relationship between financial literacy and household saving. The data for this study were gathered during January-June 2014 through questionnaires, conveniently distributed to a population group of fishermen in the age of 25 to 50 years old in Regency of Brebes, Tegal and Pekalongan, Central Java, Indonesia. Variables used in this study were financial literate and household saving. Results from 258 samples confirm that financial literacy was positively related to household saving. Eighty-five percent of fishermen were illiterate and most of them had no saving account. We also find that financial inclusion played a crucial role for fishermen in saving their money.

Gopal, Jeyanthi, Ashok, Salim, Katiha, Krishnan and Sathiadas (2014) carried out a study during 2009-11, to assess literacy, health and income status of fishers in India with reference to the post-harvest sector which covered fishers in marketing and processing. The study covered five states and one union territory, covering 11 districts reaching 548 households. About 52.19% of the respondents fell in the age group of 36-55. The average male-female ratio was 1.03 and 66.61% of the families were in the small family category of 2-4members. It was observed that the literacy rates among fishers in the post-harvest sector in different states ranged from 63.74 to 95.81%. In general, the literacy rates were comparable to the national average. Maternal and child mortality was low in the sample studied and the average birth weight of infants was 2.68 kg. The average monthly income was Rs. 7027.45 with a daily income of Rs. 234.25. About 44.70% of the households had no savings and 47.81% of households were in debt.

## **Financial Literacy and Performance**

Fernandes (2015) assessed the financial literacy levels of small business owners (microenterprises and small enterprises) in the North of Portugal and to analyze the relationship between these results and the operating performance of those companies, as a measure of business economic performance. The study tests the hypothesis that all other factors being constant, a higher financial literacy level of small business owners should motivate a better performance of the company. The relevance around the chosen target is justified by the fact that small businesses, defined by microenterprises and small enterprises, are an important driver for the Portuguese economy since they represent 35% of the total revenues in 2013, through 98% of a universe of 380.000 companies, and employ a meaningful part of national workforce. The sample in this study is composed by small businesses of the North of Portugal, specifically from the regions of Porto, Braga, Viana do Castelo and Vila Real, and through questionnaires, it was obtained the data needed to gauge the levels of financial literacy. The results evidence a rather level of financial literacy among small business owners of the micro and small business in the North of Portugal. And, the data also supports the existence of a significant positive correlation between financial literacy levels and companies' operating performance. This result highlights the importance of providing small business owner adequate financial education on the expectation of improving their performance as business leaders.

Carvalho (2008) conducted a study on small scale fishing profits in two communities in the Upper Paraná River floodplain (Porto Rico – PRI and Porto São José – PSJ villages) were assessed based on interviews carried out with professional fishermen. There is a high illiteracy level in both PRI (50%) and PSJ (44.5%). The main contributions to income are “vessel costs” and “fish consumption” by the family. Specific tackle (such as cevadeira) and gear used for fishing close to dams make the gear costs higher at PSJ, emphasizing the heterogeneity of the activity. Most fishermen in both villages have income complementation activities associated with tourism because floodplain fishing is not a profitable occupation with any poverty alleviation capacity. Since the ecosystem is seriously disrupted, nowadays fishers are vulnerable to high oscillations in costs and income due to uncertainty in catches aggravated by flood control of the dams.

### **Micro Finance Services from Microfinance Institutions and Performance**

Access to finance by artisanal fishermen has been analysed in different studies. Okwu, Yahaya and Obinne (2011) analysed the information needs of artisanal fishermen in Nigeria and reported that there was limited information related to the access of finance by artisanal fishermen. A study by Mwaijande & Lugendo (2013) found that 49% of the surveyed fishermen in Tanzania were constrained in access to loans and resulted in using their own funds for fish farming. In addition, the study found that few of the artisanal fishermen were able to access loans from financial institutions.

Acquah and Abunyuwah (2011) established a significant relationship between access to finance and the decision to become a fisherman in Ghana. On the



other hand, the same study showed that respondents cited: lack of storage facilities (57%), lack of finance (85%), high transport costs (45%), unpredictable weather conditions and low governance assistances were the main constraints in fish farming.

Thompson and Mafimisebi (2014) reported that over 87% did not have any access to finance among the catfish aquaculture in Nigeria. Olaoye, Ashley- Dejo, Fakoya, Ikewinwe, Alegbeleye, Ashaolu and Adelaja, (2013) found that the lack of groups among artisanal fishermen affected the access to finance and information by fishermen. However, 63.5% of the respondents did not consider the lack of finance as a hindrance to the development of fisheries. Onyango and Jentoft (2010) assessed artisanal fisheries in Bangladesh and Tanzania. The study showed that artisanal fishermen were constrained in access to finance due to the lack of collateral and landed assets. Consequently, fishermen relied on informal credit systems e.g. Dandon, which lead them to sell fish at prices that were 20- 40% lower than the market prices. This caused the dandodar to be the owner of the family assets and fish. In addition, the uncertain income of the fishermen caused difficulties in repayment of the loans from micro creditors.

Oloo and Atieno (2011) conducted a survey on the influence of fish farming on the economy of Kisumu in Kenya. Access to finance for fish farming was found to be a major constraint for fishermen who were not cooperative members. The cooperative members, on the other hand, were able to repay loans and had alternative sources of income. There was however non-cash credit organized among the traders when obtaining fish stocks. Kariuki (2011) reported that fish

traders in different outlets in Kenya use informal sources of finance. A total of 50% of the traders used “merry go rounds”, 17% used family and friends, while 21% used financial institutions and formal banks to access finance for their operations. The funds were used for the purchase of fish stock, equipment and to facilitate daily operations. 2.1 The determinants of accessing finance in aquaculture (Olale & Henson, 2013) assessed the income diversification among the fishermen in Western Kenya. The results of the study showed that access to finance, education level and membership in associations were key determinants of the diversification of income among the fishermen in Western Kenya. Osondu (2014) reported that there was a significant association between access to finance and production among the fishermen in Nigeria. There were 63.9% of the farmers in the study without access to finance. Despite the low access to finance, fish farming had a benefit-cost ratio (BCR) of 2.20 and an ROI of 90%.

### **Chapter Summary**

The chapter reviewed theories and concepts which are related to the study. Among the theories reviewed included prospect theory and financial literacy. The chapter also discussed the following concepts: financial literacy, firm performance, financial access, the relationship between financial literacy and performance, the relationship between financial literacy, financial capital availability and firm performance, the relationship between financial access and performance. The chapter ended with an empirical review of the study on the financial literacy level of fishermen, financial literacy and performance, microfinance services from microfinance institutions and performance.

## **CHAPTER THREE**

### **RESEARCH METHODS**

#### **Introduction**

The chapter presents the philosophical foundation underpinning the study, the research design, the study population and the sampling approaches. It also outlines the methods and approaches that were used to conduct the study. The type and sources of data are explained, as well as the methods of data collection and how reliability and validity were being ensured. The chapter also presents the operationalization of variables and data analysis methods.

#### **Research Design**

A research design is a logical sequence or blueprint that connects the empirical data to a study's initial research questions and, ultimately, to its conclusions (Yin, 2003). This study was conducted using a cross-sectional study design. The cross-sectional design involves making observations of a population or sample of the study at one point in time (Babbie, 2012). The design is useful in identifying the characteristics of an observed phenomenon or exploring possible correlations among two or more phenomena (Leedy & Ormrod, 2001). The cross-sectional design was also appropriate for this study as it enabled the researcher to determine the prevalence of the study variables (the relationships among financial literacy, access to finance and performance) in a cross-section of the study population at a given point in time.

Also, this study was a descriptive-correlation research design. The study was designed to determine the relationships among financial knowledge, financial literacy and access to finance on performance. A survey research questionnaire that combines both open-ended and closed-ended questions was used. Cooper, Schindler, and Sun (2006) define descriptive research as a fact-finding approach generating across-sectional study of the present situation. It ascertains and describes these characteristics of the variables of interest in a situation. It is restricted to a fact-finding and may result in the formation of an important principle of knowledge and solutions to significant problems. According to Ary et al. (2002), surveys allow the researcher to summarize the characteristics of different groups or to measure their opinions towards some issues.

### **Research Approach**

The study adopted the quantitative research approach which is generally associated with the positivist paradigm. It usually involves collecting and converting data into numerical form so that statistical analysis can be made and conclusions are drawn. The quantitative approach suits the study as it addresses research questions developed into hypotheses to be tested for possible relationships between variables (Amaratunga, Baldry, Sarshar & Newton, 2002).

### **Philosophical underpinnings**

The choice of research philosophy is often influenced by the researcher's basic ontological and epistemological positions (Pittaway & Thorpe, 2012). Positivism and phenomenology/interpretivism are the two widely acknowledged research philosophies. Positivistic approaches seek to establish causal links and

relationships between the different elements (or variables) of the subject and relate them to a theory or practice (Hammersley & Traianou, 2012).

This study adopted the positivism philosophy due to ontological, epistemological and methodological considerations. These considerations influenced the assumptions and hypothesis about relationships among study variables, the operationalization of constructs and testing of the hypotheses in order to discover relationships that will be generalized to the study population.

### **Study Area**

The Komenda Edina Eguafo Abrem (KEEA) Municipality is made of four traditional areas or states, which have been put together to constitute a political district. The Komenda Edina Eguafo Abirem District was carved out of the Cape Coast Municipal Council in 1988. The Municipality has Elmina as its municipal capital, which was the first point of contact with the early Europeans to this country. This town, therefore, witnessed a lot of western civilization and influence as well as other economic activities over the centuries. The population of Komenda Edna Eguafo Abrem Municipal, according to the 2010 Population and Housing Census, is 144,705 representing 6.6 percent of the region's total population. Males constitute 48.2 percent and females represent 51.8 percent. Sixty-four percent of the population is rural.



Source: Ghana Statistical Service, GIS

**Figure 2: Map of Study Area**

The Municipality has a sex ratio of 92.8. The population of the district is youthful (40.2% of the population below 15 years) depicting a broad base population pyramid which tapers off with a small number of elderly persons (8.6%). The total age dependency ratio for the District is 86.8, the age dependency ratio for males is higher (88.9) than that of females (84.8).

The Municipality has a household population of 139,056 with a total number of 35,402 households. The average household size in the district is 3.9 persons per household. Children constitute the largest proportion of the household structure accounting for 39.5 percent. Spouses form about 9.7 percent. Nuclear households (head, spouse(s) and children) constitute 27.9 percent of the total number of households in the Municipality.

About four in ten (41.0%) of the population aged 12 years and older are married, 39.0 percent have never married, 4.0 percent are in consensual unions. Those who are widowed and those who are divorced each constitute 7.0 percent and 2.0 percent are separated. Among the married, 33.4 percent have no education. More than half of the married population (80.2%) is employed, 3.5 percent are unemployed, and 16.3 percent are economically not active. A greater proportion of those who have never married (66.5%) is economically not active with 4.4 percent of being unemployed. Of the population 11 years and above, 63.7 percent are literate, and 36.3 percent are non-literate. The proportion of literate males is higher (82.4%) than that of females (66.2%). Six out of ten people (63.7%) indicated they could speak and write both English and Ghanaian languages. Of the population aged 3 years and above (132,664) in the Municipality, 22.6 percent has never attended school, 41.6 percent are currently attending, and 35.8 percent have attended in the past.

About 67.6 percent of the population aged 15 years and older are economically active while 32.4 percent are economically not active. Of the economically active population, 93.6 percent is employed while 6.4 percent is unemployed. For those who are economically not active, a larger percentage of them are students (42.4%), 19.3% perform household duties and 5.9 percent is disabled or too sick to work. Five out of ten unemployed persons in the Municipality are seeking work for the first time. Of the employed population, the highest proportion (42.2%) is engaged as skilled agricultural, forestry and fishery workers. About 21 percent are engaged in service and sales; 18.0 percent in craft and related

trades, 1.3 percent in technician and related associate professionals, and 6.7 percent in managerial and professionals.

### **Population**

Grinnell and Williams (1990) defined a population as the totality of persons or objects with which a study is concerned. However, Ghana lacks a comprehensive register of all artisanal fishermen operating in the country, with this not excluding KEEA district. As a result, the researcher took a preliminary survey at the Elmina fishing harbour to ascertain the total number of artisanal fishermen. Thus, the target population of this study is 460 artisanal fishermen in the Komenda Edna Eguafo Abirem District (KEEA). According to the preliminary survey, the educational level of the artisanal fishermen is very low. Most of the fishermen have low or no formal education. Only as little as five percent, according to the survey, have educational level up to the Junior High School level. Per the survey conducted, most of the fishermen, about eighty-five percent falls between the age of twenty and sixty years, five percentage are below twenty years but above sixteen years and the remaining ten percent are above sixty years.

### **Sampling Procedure**

Based on the target population, the sampling frame is determined. The sample size for this study was calculated using the formula for the finite population as proposed by Israel (2013).

$$n = \frac{N}{1 + N(e^2)}$$

Where:

n= desired sample size



N= Population

e = margin of error at 5% (standard value of 0.05)

Therefore, using a target population of 460 artisanal fishermen, the sample size is determined as:

$$n = \frac{460}{1 + 460 (0.05^2)}$$

$$n = \frac{460}{2.15}$$

$$n = 214$$

Thus, the sample size for the study is 214 artisanal fishermen.

### **Sampling Techniques**

Sampling techniques provide a range of methods that enable you to reduce the amount of data you need to collect by considering only data from a subgroup rather than all cases or elements. The researcher employed the simple random sampling to select respondents for the study. The objective for using simple random sampling was to give all artisanal fishermen equal opportunity of being selected and thereby give room for true generalization (Kumar, Mohri, Talwalkar, 2009). Given the sample size of 214, the researcher used simple random sampling (precisely the lottery method) to select the respondents at each level. The researcher wrote “YES” and “No” on a sheet of paper, folded them, placed them in a bowl, mixed them thoroughly and called artisanal fishermen to pick the folded papers one after the other. Artisanal fishermen who picked papers embossed “YES” were selected for the study. In line with the simple random sampling method, fishermen who operated within the enclave of the KEEA district were included in the study. This process was repeated and yielded 214 as the total respondents for the study.

According to Kothari, (2004) 10% of the sample size (emanating from the target population) is enough to conduct research.

### **Data Collection Instrument**

The primary instrument used in the data collected would be questionnaires using nominal and scaled items. The pretesting revealed issues regarding clarity, accuracy and appropriateness. Providing solution to these issues ensured that the final questionnaire was valid, reliable and appropriate for the study. Most of the questions were structured on an agreement continuum using 5-point Likert type scales. The questionnaire comprised of four main sections related to the dependent and independent variables. Section A of the questionnaire generated demographic data of respondents. Sections B, C and D and E generated data on financial literacy, financial access and performance in the fishing industry respectively. The questionnaires were developed by the researcher as a guided questionnaire since most of the respondents have little or no education. The questionnaires were distributed by the research team trained by the researcher to assist in carrying out the research activity smoothly and timely.

### **Data Processing and Analysis**

The goal of analyzing data is to treat the evidence fairly to produce compelling analytical conclusions and to rule out alternative interpretations (Yin,2018). Data analysis usually involves reducing accumulated data to a manageable size, developing summaries, looking for patterns, and applying statistical techniques (Cooper & Schindler,2001).

Data were processed using the Statistical Package for Social Science 22 (SPSS 22). The data collected were analyzed using Partial Least Square Structural Equation Model (PLS-SEM). PLS-SEM places minimal demands on measurement scales, residual distributions, sample size and allows multiple predictor variables (Frazier, Tix & Baron, 2004).

### **Ethical Considerations**

It was imperative to protect information gathered from respondents and the study organization in the course of the research. The researcher ensured that responses given by participants could not be traced back to the respondents in the analysis. Respondents' names were not included in the questionnaire to ensure confidentiality. Respondents were obliged to provide written informed consent, which requires that respondents were competent and had a full understanding of the study, voluntariness in participation and the freedom to decline or withdraw at any time during the research process (Blanche, Durrheim & Painter, 2006).

### **Chapter Summary**

This study used a cross-sectional study design and the positivist philosophy which is useful in testing of hypotheses to make generalization into the study population. The study used a population of 460 artisanal fishermen out of which 214 was selected. The researcher employed the simple random sampling which gives all artisanal fishermen equal opportunity of being selected into the study. The primary instrument used in the data collected was questionnaires and data collected was analyzed using Partial Least Square Structural Equation Model (PLS-SEM).

The study also ensured prudence and formal ethical issues to ensure confidentiality and anonymity of respondents.

## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### **Introduction**

This chapter presents the empirical analysis of the relationship between financial literacy, microfinance, and performance of artisanal fishermen in Elmina fishing community. The first section assesses the financial knowledge level among artisanal fishermen in the Elmina community. The second section examines artisanal fishermen's access to finance from microfinance institutions. The last section looks at the interrelationships between financial behaviour, financial wellbeing, financial knowledge, access to finance, financial performance, income level and firm size using PLS- Structural Equation Modelling. The PLS technique is based on an iterative combination of principal components analysis and regression. Its advantage is that it simultaneously estimates all the path coefficients and individual item loadings in the context of a specified model.

#### **Financial knowledge level among artisanal fishermen in the Elmina community**

Descriptive analysis was employed to analyze the financial knowledge level among artisanal fishermen in the Elmina community after conducting factor analysis using Principal Component Analysis (PCA) with varimax rotation which tries to maximize the variance of the factors to elicit the factors that form the construct financial knowledge (Abdi, 2003). From Table 1 Bartlett's Test of Sphericity with  $p < 0.05$  shows the correlation matrix is not an identity matrix indicates that the items can form a construct because they have some form of a

linear relationship. The sample size was satisfactory to conduct factor analysis as the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.536 with a total variance explained of 24.455% which contains the total variance accounted for by all factor (Williams, Onsman & Brown, 2010). Using a four-point Likert scale to measure fishermen’s level of financial literacy ranging from 1- Agree to 4- Disagree, each of the four items that loaded well on the financial knowledge construct had a mean greater than 2 and Overall Mean = 2.53 indicated that in general, the financial knowledge of fishermen is high, thus, the level of financial knowledge among artisanal fishermen in the Elmina community (Bontis, 2001 & Hilgert et al., 2003).

**Table 1: Level of financial knowledge of fishermen**

Statements	Mean	Std. Deviation	Item Loading
FK23	3.0796	.93468	.333
FK28	2.4286	1.07564	.326
FK24	2.3892	1.08604	.402
FK26	2.2512	1.05818	.409
<i>Overall Mean</i>		<i>2.53715</i>	
Total Variance Explained	24.455%		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.536		
Bartlett's Test of Sphericity (Sig)	.004		

Source: Fieldwork, Amenuku (2018)

**Artisanal fishermen’s access to finance from microfinance institutions**

From Table 1, descriptive statistics of means and the standard deviation were employed to analyze access to finance from microfinance institutions to artisanal fishermen in the Elmina community. Principal Component Analysis

(PCA) was used to extract the factors with varimax rotation which tries to maximize the variance of the factors to elicit the factors that form the construct access to finance (Abdi, 2003). Using Bartlett's Test of Sphericity with  $p < 0.05$  shows the correlation matrix is not an identity matrix which indicates that the items can form a construct because they have some form of a linear relationship. Kaiser-Meyer-Olkin measure of sampling adequacy which is used as a measure of sample size adequacy was 0.554 with a total variance explained of 15.457% which contains the total variance accounted for by all factor (Williams, Onsman & Brown, 2010). Using a four-point Likert scale to measure access to finance by fishermen ranging from 1- Agree to 4- Disagree, out of the seven items that loaded well on the access to finance construct, four of the items had a mean greater than 2 and three had means greater than 1.5. Overall Mean = 2.31 indicating that in general, the fishermen agree that they have access to microfinance facilities from microfinance institutions (Mensah & Antwi, 2002).

**Table 2: Access to financial services from microfinance institutions**

Statement	Mean	Std. Deviation	Item Loading
A67	3.2857	.70158	.495
A64	2.9803	.86150	.590
A66	2.7882	.92782	.325
A68	2.0446	.83039	.357
A61	1.7673	.82879	.351
A60	1.6847	.81999	.394
A63	1.6108	.66844	.372
<i>Overall Mean</i>		2.3088	
Total Variance Explained	15.457%		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.554		
Bartlett's Test of Sphericity (sig value)	.000		

Source: Fieldwork, Amenuku (2018)

### **Construct Reliability, Indicator Reliability and Convergent Validity**

The results of the PLS- Structural Equation Modelling begin with an assessment of the model to determine its fitness by assessing the construct reliability, indicator reliability, convergent validity, and discriminant validity. Construct reliability was tested using composite reliability. The results from Table 3 show that all the constructs have composite reliability above the minimum of 0.7 in all cases, an indication that the constructs are reliable (Straub, 1989). A cursory look at the item loading from Table 3 also proved indicator reliability per the minimum cut-off of 0.7 (Henseler et al., 2009). Almost all the indicators loaded above 0.7, apart from a few indicators that loaded below the minimum preferred threshold of 0.7. Fornell and Larcker (1981) recommended a minimum average variance extracted (AVE) of 0.5 for a construct to show convergent validity. This is true for all the constructs of this study; the least AVE is 0.510 (see Table 3). Hair, Sarstedt, Hopkins and Kuppelwieser (2014) point out that to establish convergent validity, factor loadings must be 0.70 and above. An AVE value of 0.50 or higher indicates that, on average, the construct explains more than half of the variance of its indicators. Conversely, an AVE of less than 0.50 indicates that, on average, more error remains in the items than the variance explained by the construct. The results indicate that the model has achieved convergent validity since all latent variables have AVE of 0.50 and above.



**Table 3: Summary of Measurement Scale**

LATENT VARIABLE	INDICATORS	Mean	SD	Loadings	CR	AVE
<b>Model 1</b>						
<i>FINANCIAL BEHAVIOR</i>					<b>0.722</b>	<b>0.572</b>
	FB17	2.55	1.15	0.878		
	FB22	2.34	1.07	0.612		
<i>FINANCIAL KNOWLEDGE</i>					<b>0.729</b>	<b>0.582</b>
	FK24	2.39	1.09	0.887		
	FK26	2.25	1.06	0.613		
<i>FINANCIAL WELLBEING</i>					<b>0.778</b>	<b>0.539</b>
	FW31	2.65	1.13	0.730		
	FW33	2.43	1.07	0.753		
	FW35	2.42	1.12	0.720		
<i>ACCESS TO CREDIT</i>					<b>0.762</b>	<b>0.516</b>
	A64	2.98	0.86	0.710		
	A66	2.79	0.93	0.761		
	A67	3.29	0.70	0.683		
<i>PERFORMANCE</i>					<b>1.00</b>	<b>1.00</b>
	P55	4124.45	7025	1.000		
<b>Model 2</b>						
<i>FINANCIAL BEHAVIOR</i>					<b>0.700</b>	<b>0.537</b>
	FB17	2.55	1.15	0.748		
	FB18	2.43	1.13	0.716		
<i>FINANCIAL KNOWLEDGE</i>					<b>0.744</b>	<b>0.593</b>
	FK26	2.39	1.09	0.738		
	FK28	2.43	1.07	0.801		
<i>FINANCIAL WELLBEING</i>					<b>0.756</b>	<b>0.510</b>
	FW31	2.65	1.13	0.810		
	FW33	2.43	1.07	0.635		
	FW36	2.45	1.14	0.687		
<i>ACCESS TO FINANCE</i>					<b>0.761</b>	<b>0.515</b>
	A64	2.98	0.86	0.692		
	A66	2.79	0.93	0.770		
	A67	3.29	0.70	0.688		
<i>INCOME</i>					<b>1.00</b>	<b>1.00</b>
	Q10	4439	30453.2	1.000		
<i>SIZE OF FIRM</i>					<b>1.00</b>	<b>1.00</b>
	P41	2.31	1.74	1.000		
<b>Model 3- Sales</b>						
<i>FINANCIAL BEHAVIOR</i>					<b>0.721</b>	<b>0.564</b>
	FB15	3.14	.91	0.745		

FB16	3.21	.90	0.757		
<i>FINANCIAL KNOWLEDGE</i>				<b>0.717</b>	<b>0.576</b>
FK26	2.39	1.09	0.536		
FK28	2.43	1.07	0.930		
<i>FINANCIAL WELLBEING</i>				<b>0.833</b>	<b>0.716</b>
FW29	2.25	1.10	0.925		
FW30	2.23	1.09	0.760		
<i>ACCESS TO CREDIT</i>				<b>0.700</b>	<b>0.520</b>
A58	2.43	1.05	0.613		
A65	1.61	0.59	0.815		
<i>INCOME</i>				<b>1.00</b>	<b>1.00</b>
Q10	4439	30453.2	1.000		
<i>PERFORMANCE- Sales</i>				<b>1.00</b>	<b>1.00</b>
P55	4124.45	7024.91	1.000		

Source: Fieldwork, Amenuku (2018)

### Discriminant Validity

According to Hair, Hult, Ringle and Sarstedt (2016), the Fornell-Larcker criterion is a second and more conservative approach to assessing discriminant validity aside the cross-loadings. It compares the square root of the AVE values with the latent variables' correlations. Specifically, the square root of each construct's AVE should be greater than its highest correlation with any other construct. According to Fornell-Larcker (1981), for discriminant validity to be adequate, the square roots of each construct's AVE should be higher than the correlations of that construct with all other constructs. The results presented in Table 4-6 show that non-single items constructs satisfy this condition for Model 1, Model 2 and Model 3 respectively.

**Table 4: Discriminant and Convergent Validity of Constructs- Model 1**

CONSTRUCTS	AF	FB	FK	FW	Perf
AF	<b>0.719</b>				
FB	-0.195	<b>0.757</b>			
FK	0.061	-0.065	<b>0.763</b>		
FW	-0.268	0.218	0.308	<b>0.734</b>	
Perf	0.079	-0.128	0.202	0.023	<b>Single item construct</b>

Source: Fieldwork, Amenuku (2018)

Note: Access to Finance (AF), Financial Behavior (FB), Financial Knowledge (FK), Financial Wellbeing (FW), Performance (Perf).

**Table 5: Discriminant and Convergent Validity of Constructs- Model 2**

CONSTRUCTS	AF	FB	FK	FW	IN	FS
AF	<b>0.718</b>					
FB	-0.236	<b>0.732</b>				
FK	-0.268	0.296	<b>0.770</b>			
FW	-0.325	0.184	-0.046	<b>0.714</b>		
IN	0.022	-0.060	-0.025	0.045	<b>Single item construct</b>	
FS	0.214	-0.037	-0.158	0.057	0.007	<b>Single item construct</b>

Source: Fieldwork, Amenuku (2018)

Note: Access to Finance (AF), Financial Behavior (FB), Financial Knowledge (FK), Financial Wellbeing (FW), Income (IN), Firm Size (FS).

**Table 6: Discriminant and Convergent Validity of Constructs- Model 3**

CONSTRUCTS	AF	FB	FK	FW	IN	Perf (Sales)
AF	<b>0.721</b>					
FB	-0.027	<b>0.751</b>				
FK	0.292	-0.010	<b>0.759</b>			
FW	-0.012	-0.132	0.029	<b>0.846</b>		
IN	-0.085	-0.108	-0.024	-0.095	<b>Single item construct</b>	
Perf (Sales)	0.060	0.270	-0.146	-0.187	0.046	<b>Single item construct</b>

Source: Fieldwork, Amenuku (2018)

Note: Access to Finance (AF), Financial Behavior (FB), Financial Knowledge (FK), Financial Wellbeing (FW), Income (IN), Performance (Perf).

Having satisfied that the measurement model results indicate that the constructs satisfy the conditions of construct and indicator reliability as well as the convergent and discriminant validity, we proceed to test the research hypotheses. This task was made by assessing the direction and strength using the path coefficient ( $\beta$ ), level of significance with  $p$ -values through 5000 bootstraps, collinearity among the constructs using variance inflation factor ( $VIF$ ), goodness of fit with coefficient of determination ( $R^2$ ), effect size ( $f^2$ ), As posited by Hair et al (2014), collinearity diagnostic is first examined to ensure that the path coefficients are free from bias and reduce significant levels of collinearity among the predictor constructs. The results of the VIF from Table 8, 9, 10a and 10b show that the paths are free from multicollinearity with maximum VIF of 1.150, lower than the cut-off of 5 proposed by Hair, Hult, Ringle & Sarstedt (2014).

**Table 7: Summary of Findings- Model 1**

IV	DV	Path coeff.	Standard error	t-Stat	P-Value	R <sup>2</sup>	f <sup>2</sup>	VIF
AF	FW	-0.252	0.057	4.409	0.000***	0.212	0.077	1.044
FB	FW	0.190	0.069	2.765	0.006***	0.212	0.044	1.055
FK	FW	0.335	0.071	4.706	0.000***	0.212	0.136	1.046
Perf	FW	0.000	0.061	0.003	0.998	0.212	0.000	1.060

Source: Fieldwork, Amenuku (2018)

Note: Independent Variables (IV), Dependent Variable (DV), Access to Finance (AF), Financial Behavior (FB), Financial Knowledge (FK), Financial Wellbeing (FW), Performance (Perf). (\*), (\*\*), (\*\*\*) significant at 10%, 5%, 1%., N = 203

### **Financial literacy and access to finance on financial wellbeing**

From Table 7, the hypothesis that access to finance positively affects financial wellbeing is supported by a negative and significant path coefficient between the two constructs ( $\beta = -0.252, p < 0.01$ ) which indicates that due to the high service charges by microfinance institutions lead to a reduction in the wellbeing of fishermen due to a reduction in their disposable income which leads to low savings and investment. Financial behaviour and knowledge which are components of financial literacy positively influence financial well-being of fishermen are supported by a positive and significant path coefficient respectively ( $\beta = 0.190, p < 0.01$ ), ( $\beta = 0.335, p < 0.01$ ). The positive and significant impact findings on financial literacy components are consistent with prior expectation and the theoretical proposition of the relationship between financial literacy (behaviour and knowledge) and financial well-being. Previous empirical studies have observed a positive effect of financial literacy on financial well-being (Sabri, Cook & Gudmunson, 2012; Taft et al., 2013). Robb & Woodyard (2011) observed that the financial well-being of individuals is incumbent on their actions, behaviour and knowledge. Therefore, when people who are financially literate apply the knowledge to manage their income effectively, they are most likely to be better off with regards to their financial well-being as fishermen.

The Model 1 depicted by hypotheses H1 – H4 shows that the exogenous variables (access to finance, financial behaviour, financial knowledge and

performance) explained 21.2% of the variation in financial wellbeing and considered to be small by Cohen (1998) as shown in Table 8.

The effect size measure presented in Table 8 shows that access to credit ( $f^2 = 0.077$ ), financial behaviour ( $f^2 = 0.044$ ), and financial knowledge ( $f^2 = 0.136$ ) all have a small effect as per Cohen's  $f^2$ .

### **Financial literacy and financial wellbeing on access to finance**

From Table 9, contrary to expectation, the fifth hypothesis (financial behaviour positively influences access to finance of fishermen) and the eighth hypothesis (income level positively influences access to finance of fishermen) were not supported. The constructs financial behavior ( $\beta = -0.101, p > 0.05$ ) and income level ( $\beta = 0.024, p > 0.05$ ) showed an insignificant relationship with access to finance of fishermen. Financial knowledge, financial wellbeing and firm size, however, proved to have significant influence on access to finance of fishermen, ( $\beta = -0.222, p < 0.01$ ), ( $\beta = -0.329, p < 0.01$ ), ( $\beta = 0.193, p < 0.05$ ), respectively. The results suggest that fishermen have the poor financial knowledge and financial wellbeing that lead to their inability to acquire loans facilities from microfinance institutions. The positive and significant impact finding of firm size on access to credit by fishermen are consistent with prior expectation. Previous empirical studies have observed a positive effect of firm size on access to funds (Beck & Demirguc- Kunt, 2005; Akoten, Sawada & Otsuka, 2006). Therefore, as fishermen expand their fishing activities, they get more access to finance from microfinance institutions.

The Model 2 depicted by hypotheses H5 – H9 shows that the exogenous variables (financial behaviour, financial knowledge, financial wellbeing, income level, and size of firm) explained 23.2% of the variation in access to finance, and considered to be small by Cohen (1998) as shown in Table 9.

The effect size measure presented in Table 9 shows that financial knowledge ( $f^2 = 0.057$ ), financial wellbeing ( $f^2 = 0.134$ ), and size of the firm ( $f^2 = 0.047$ ) all have a small effect as per Cohen's  $f^2$ .

**Table 8: Summary of Findings- Model 2**

IV	DV	Path coeff.	Standard error	t-Stat	P-Value	R <sup>2</sup>	$f^2$	VIF
FB	AF	-0.101	0.063	1.613	0.107	0.232	0.012	1.150
FK	AF	-0.222	0.079	2.791	0.005***	0.232	0.057	1.133
FW	AF	-0.329	0.054	6.063	0.000***	0.232	0.134	1.053
IN	AF	0.024	0.053	0.457	0.648	0.232	0.001	1.007
FS	AF	0.193	0.084	2.296	0.022**	0.232	0.047	1.028

Source: Fieldwork, Amenuku (2018)

Note: Independent Variables (IV), Dependent Variable (DV), Access to Finance (AF), Financial Behavior (FB), Financial Knowledge (FK), Financial Wellbeing (FW), Income (IN), Firm Size (FS). (\*), (\*\*), (\*\*\*) significant at 10%, 5%, 1%., N = 203

**Financial literacy, financial wellbeing and access to finance on performance (sales) from Model 3**

From Table 11, to check results sales were employed as a measure of performance in Model 3, contrary to expectation, the thirteenth hypothesis (income level positively influences the performance of fishermen) and the fourteenth hypothesis (access to finance positively influences the performance of fishermen) were not supported. The construct access to finance ( $\beta = 0.122, p > 0.05$ ), and

income level ( $\beta = 0.067, p > 0.05$ ) showed an insignificant relationship with performance of fishermen measured by sales/revenue. Financial behavior ( $\beta = 0.260, p < 0.01$ ), financial knowledge ( $\beta = -0.174, p = 0.05$ ), and financial wellbeing ( $\beta = -0.140, p < 0.01$ ), however, proved to have significant influence on performance of fishermen measured by sales/revenue. Financial behaviour which is a component of financial literacy positively influences the performance of fishermen which is supported by empirical studies that suggested a positive effect of financial behaviour on performance (Wise, 2013; Siekei, Wagoki & Kalio, 2013; Fatoki, 2014). Therefore, fishermen who are financially literate can apply financial knowledge to manage their businesses effectively, then they are most likely to be profitable with regards to their fishing business. Financial wellbeing showed a negative effect on performance this can be attributed to the fact that as fishermen generate income from their fishing activities these monies are not ploughed back into the business thereby decreasing the loan available for the fishing business which then leads to a decline in fishing activities thereby accumulating low sales.

The Model 3 depicted by hypotheses H10 – H14 shows that the exogenous variables (financial behaviour, financial knowledge, financial wellbeing, income level, and access to finance) explained 13.2% of the variation in performance of fishermen measured by sales/revenue and considered to be very small by Cohen (1998) as shown in Table 11. The effect size measure presented in Table 11 shows that financial behaviour ( $f^2 = 0.076$ ), financial knowledge ( $f^2 = 0.032$ ), and financial wellbeing ( $f^2=0.022$ ) all have a small effect on the performance of fishermen as per Cohen's  $f^2$ .



**Table 9: Summary of Findings- Model 3 (Performance- Sales)**

IV	DV	Path coeff.	Standard error	t-Stat	P-Value	R <sup>2</sup>	f <sup>2</sup>	VIF
AF	Perf	0.122	0.101	1.209	0.227	0.132	0.016	1.103
FB	Perf	0.260	0.071	3.688	0.000***	0.132	0.076	1.035
FK	Perf	-0.174	0.088	1.967	0.050**	0.132	0.032	1.095
FW	Perf	-0.140	0.050	2.795	0.005***	0.132	0.022	1.032
IN	Perf	0.067	0.100	0.669	0.504	0.132	0.005	1.033

Source: Fieldwork, Amenuku (2018)

Note: Independent Variables (IV), Dependent Variable (DV), Access to Finance (AF), Financial Behavior (FB), Financial Knowledge (FK), Financial Wellbeing (FW), Income (IN), Performance (Perf). (\*), (\*\*), (\*\*\*) significant at 10%, 5%, 1%., N = 203

### Chapter Summary

This chapter seeks to analyse the objectives of the study and relate to a wider literature. The results observed a positive effect of financial literacy on financial well-being which is supported by empirical research, also the results suggested fishermen with poor financial knowledge and financial wellbeing lead to their inability to acquire loan facilities from microfinance institutions. The findings also indicated that there is a positive and significant effect of financial behaviour on the performance of fishermen which suggest that fishermen with sound and adequate financial behaviour can acquire more loan facilities from microfinance institutions. Lastly, fishermen who are financially literate can apply the financial knowledge to manage their businesses effectively which would lead to higher sales and profitability.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### **Introduction**

This chapter presents the summary of the study, conclusions and recommendations on the research results of the study. The general objective of the study was to examine the relationship between financial literacy, access microfinance and performance of the artisanal fishing industry in Elmina. The summary, conclusion and recommendations are based on the hypothesis and the findings drawn from the analysis and interpretations.

#### **Summary of Findings**

##### **Financial knowledge level among fishermen**

The study indicated that on the average financial knowledge of fishermen is above average. Acquah and Addo (2011) argued that given the low level of education of fishermen they are likely to have high loan default. Hidajat (2015) found that most fishermen in Indonesia have a low level of financial literacy as it also comes from a poor fishing family.

##### **Artisanal fishermen's access to finance services**

Using a four-point Likert scale to measure access to finance by fishermen ranging from 1- Agree to 4- Disagree, with Overall Mean = 2.31 indicated that in general, the fishermen agree that they have access to microfinance facilities from microfinance institutions. This shows that fishing activities are supported with loan facilities.

### **Financial literacy and access to finance on financial wellbeing**

Financial behaviour and knowledge which are components of financial literacy positively influence the financial well-being of fishermen. Previous empirical studies have observed a positive effect of financial literacy on financial well-being. The study revealed that microfinance institutions charged high interest on their loan granted to the fishermen. This high cost reduces the profits from the fishing business due to high-interest expense which reduces the net gain of fishermen. The wellbeing of fishermen is reduced because a greater portion of their income is used to service interest on loans from microfinance institutions.

### **Financial literacy and financial wellbeing on access to finance**

Due to poor financial knowledge of fishermen in the community, they find it difficult to understand issues related to loan acquisition. Also, as a result of high illiteracy in the community, most fishermen do not understand the terms and conditions of a loan. These make it difficult for fishermen to apply for loan. Empirical results revealed that firm size has a positive effect on access to finance by fishermen and this is because Elmina fishing community is among the largest fishing communities in Ghana. Most fishermen own bigger vessels which can be used as collateral for loan application.

### **Financial literacy, financial wellbeing and access to finance on performance**

Financial behaviour which is a component of financial literacy positively influences the performance of fishermen. Therefore, fishermen who are financially literate can apply financial knowledge to manage their businesses effectively, then

they are most likely to be profitable with regards to their fishing business. Financial wellbeing showed a negative effect on performance this can be attributed to the fact that as fishermen generate income from their fishing activities these monies are not ploughed back into the business thereby decreasing the credit available for the fishing business which then leads to a decline in fishing activities thereby accumulating low sales.

Overall, the study found that the financial knowledge of fishermen affects their ability to access finance and their performance. While fishermen with high financial knowledge generally have greater opportunity to access finance which leads to better performance, those with lower financial literacy stand lower chances of accessing finance from financial institutions and this affect their performance in the long term.

### **Conclusions**

Having found out that artisanal fishermen possess above average financial knowledge, it is implied that although they appear to have not gained high level of formal education, there might be several sources of knowledge that have enriched their financial knowledge. Their above average financial knowledge also implies that artisanal fishermen are well informed of their financial transactions and make informed decisions. Thus, decisions they make around their operational expenditure and income is not borne out of gross ignorance, but rather a thought through activity. Also, as it has been established that artisanal fishermen have no access to microfinance, it implies that the capital base for their production and daily operation is less supported by microfinance facilities. This means that the capital

structure of fishermen appears to be more owners' equity and less debt financed. This implies that the various fishing economic activity in the Elmina fishing community appear to be lowly geared towards outside interest. Having found that financial behaviour and financial knowledge positively influences financial well-being of fishermen implies that financial literacy has a positive bearing on the financial lifestyle of the fishermen. This implies that the standards of living of fishermen are likely to improve when their financial literacy level is increased. Then it is further implied that a sound knowledge of financial issues and the behaviour of fishermen in accordance with their finances translates into the financial independence of the fishermen. It could therefore be inferred that standard of living of fisherman is likely to improve if they have improved attitude towards their financial dealings and advance their financial knowledge.

In furtherance, with the study revealing that financial knowledge and wellbeing have negative influence on access to microfinance implies that deep financial understanding by fishermen probably makes them reject the financial assistance to be provided by the microfinance institutions. This means that, since it has been established that artisanal fishermen have above average financial knowledge, and then these fishermen are likely to read deeper meanings to financial assistance being offered by these microfinance institutions and then reject the offer because the implicit cost might have outweighed the nominal cost. In addition, as found that firm size has a positive influence on the access to microfinance, suggests that microfinance institutions are in for firms with huge asset based that can easily be seized in situations of default payments.

Finally, having established that financial knowledge and financial wellbeing positively influences performance depicts that financial dependent fishermen and knowledgeable fishermen are performing well in the fishing industry in terms of sales. This means that for firms to aim at increased sales, attention should not be paid at having access to microfinance facilities, but rather a dedication to the development of the financial soundness of the fishermen and, the financial wellbeing of the fishermen.

### **Recommendations**

Considering the findings discussed and the conclusions reached, the following recommendations are made:

1. Association of Fishermen in Elmina Community should organize frequent workshop inviting financial experts to educate the fishermen on financial matters to either maintain their financial knowledge level or increase the level of financial knowledge.
2. Microfinance activities should be extended to artisanal fishermen as they do not have access to them. Also, the Ministry of Fisheries and Aquaculture Development (MoFAD) should make the access of funding for fishing among artisanal fishermen easier to enhance access to microfinance.
3. NGOs and individual partners into ensuring improved standard of living should ensure that as part of the workshops, seminars, symposia and durbars organized, will include education on financial literacy as it will help improve the financial wellbeing of the artisanal fishermen.

4. Microfinance institutions are to reduce burdensome conditions of ascertaining funds and the implied cost effect of ascertain funds to enhance easy access of funds from these financially literate artisanal fishermen.
5. Artisanal fishermen are to seek for other sources of income to expand their firms, as it will boost their chances of gaining access to microfinance.

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## APPENDIX

### QUESTIONNAIRE FOR FISHERMEN

UNIVERSITY OF CAPE COAST  
COLLEGE OF HUMANITIES AND LEGAL STUDIES  
SCHOOL OF BUSINESS  
DEPARTMENT OF FINANCE

**Dear respondent,**

This questionnaire seeks to generate results from you as the study investigates financial literacy, access to microfinance facilities and the performance of firms in Elmina. You have been chosen as one of the respondents who would contribute immensely to the study. You are kindly entreated to provide accurate responses by ticking beside your opinion on the items provided on the questionnaire. Your name is not required and you are assured of **confidentiality** and **anonymity**.

#### SECTION A

##### Demographic Information

*Instruction: Please tick [✓] the appropriate box [ ] or write in the blank space provided.*

1. Age: 20s [ ]      30s [ ]      40s [ ]      50s [ ]      60s [ ]
2. How long have you been in this business?  
5-10yrs [ ] 11yrs-20yrs [ ] over 20yrs [ ]
3. Do you have a bank account? Yes [ ]      No [ ]
4. Your marital status.  
Never Married [ ] Married [ ] Divorced [ ] Widow/widower [ ]
5. Religion. Catholic [ ]      Protestant [ ] Muslim [ ]  
Traditionalist [ ] Others \_\_\_\_\_
6. Gender Male [ ] Female [ ]
7. Educational Background None [ ] Primary [ ] JHS [ ] SHS [ ]  
Tertiary [ ] Others Specify \_\_\_\_\_

8. Course taken \_\_\_\_\_
9. Parents' educational background None [ ] Primary [ ] JHS [ ]  
SHS [ ] Tertiary [ ] Others Specify \_\_\_\_\_
10. What is your income level? \_\_\_\_\_
11. How many people depend on your income? \_\_\_\_\_
12. Do family support you with finances for your business?  
Yes [ ] No [ ]
13. Apart from family, do you get financial support from any other source?  
Yes [ ] No [ ]

## SECTION B

### Financial Literacy of Fishermen

Please tick [] the appropriate column to indicate whether you “Strongly Disagree (SD), Disagree (D), Agree (A), Strongly Agree (SA)” to these statements as they measure your financial literacy level.

SRN	Statement	SD	D	A	SA
	<b>Financial Behavior</b>				
FB 14	Before I buy something, I carefully consider whether I can afford				
FB 15	I settle my bills on time				
FB 16	I keep a personal watch on my financial affairs				
FB 17	I set long term financial goals and I strive to achieve them				
FB 18	I am responsible, and I have a household budget				
FB 19	I find it more satisfying to save for the long term than to spend it now				

FB 20	When there are several similar products, I tend to buy what is recommended as the most selling product, rather than what I think is a good product				
FB 21	My ends are met with less borrowing				
FB 22	I compare my budget to the actual spending				
	<b>Financial Knowledge</b>				
FK 23	If I had the choice of receiving GHS 100,000 now or (2) receiving GHS 110, 000 in 1 year, I would choose (2).				
FK 24	I am prepared to risk some of my own money when saving or making an investment				
FK 25	I know that the prices of a product might change with respect to changes in time				
FK 26	I have knowledge on the interests I pay on borrowings I make				
FK 27	I know that the prices of products increase averagely every year				
FK 28	I know that I have to invest some of my money in other places				
	<b>Financial Wellbeing</b>				
FW 29	I am comfortable with my current level of income				
FW 30	I am comfortable with my current debt level				
FW 31	My current finances enable me to concentrate on my business				
FW 32	I feel confident about the decisions I make				
FW 33	My personal finances are not completely out of control relative to my income				

FW 34	I do not have financial problems that are negatively impacting my life				
FW 35	My income is enough to pay my monthly expenses				
FW 36	I save part of my income for emergency cases				
FW 37	I am satisfied with my overall economic condition				

### SECTION C

#### Firm Performance

Please provide the appropriate answer by writing in the spaces provided as we determine the performance of your firm.

38. How many employees do you have currently? \_\_\_\_\_
39. How many employees did you start with? \_\_\_\_\_
40. What is the change in the number of employees for the past one year?  
\_\_\_\_\_
41. How many assets do you have now? \_\_\_\_\_
42. How many assets did you begin the firm with? \_\_\_\_\_
43. What is your total owing now? \_\_\_\_\_
44. How much owing did you begin the firm with? \_\_\_\_\_
45. How much capital did you start the firm with? \_\_\_\_\_
46. Per your own estimation, how much capital do you have now?  
\_\_\_\_\_
47. Aside borrowings, how much money did people freely support your capital base with from the initial set up of the firm? \_\_\_\_\_
48. Aside borrowings, how much money are they supporting your capital base with now? \_\_\_\_\_
49. How much profits / losses have you made for the last year? \_\_\_\_\_



50. What has been your highest profit of or loss? Which year did it occur?  
\_\_\_\_\_
51. What has is the change in your profits or losses for the past one year?  
\_\_\_\_\_
52. How many customers do you have now? \_\_\_\_\_
53. How many customers did you begin with? \_\_\_\_\_
54. What is the change in the number of customers for the past one year?  
\_\_\_\_\_
55. How much sales per your estimation do you make for a year? (Quantity and Amount) \_\_\_\_\_
56. What has been the change in your sales for the past one year? \_\_\_\_\_
57. What has been your highest sales made? Which year did it occur? \_\_\_\_\_

### SECTION D

#### Access to Micro Finance

Please tick [] the appropriate column to indicate whether you “Strongly Disagree (SD), Disagree (D), Agree (A), Strongly Agree (SA)” to these statements as they measure your access to credit facilities.

SRN	Statement	SD	D	A	SA
A58	I have heard of a lot of financial institutions giving out loans to fishermen				
A59	I know of more than 3 institutions giving out credit facilities to fishermen				
A60	I am exposed to more than 5 products on giving credit facilities to fishermen				
A61	I have attended meetings on credit facilities opportunities				
A62	I have signed on to about 5 credit facilities before				
A63	I am currently signed on to a credit facility				

A64	The loan size is given according to the size of the firm				
A65	The loan has a relatively low-interest rate				
A66	The interest paid on the loan is less than half of the amount I receive				
A67	Periodic payment of amounts is convenient for me				
A68	When I default in the payment for a period, the police are not involved				
A69	When I default in the payment of the loan for a period, my collateral is not seized				
A70	I am monitored for what I use the loan for				
A71	I attend seminars on how best to use the loan				