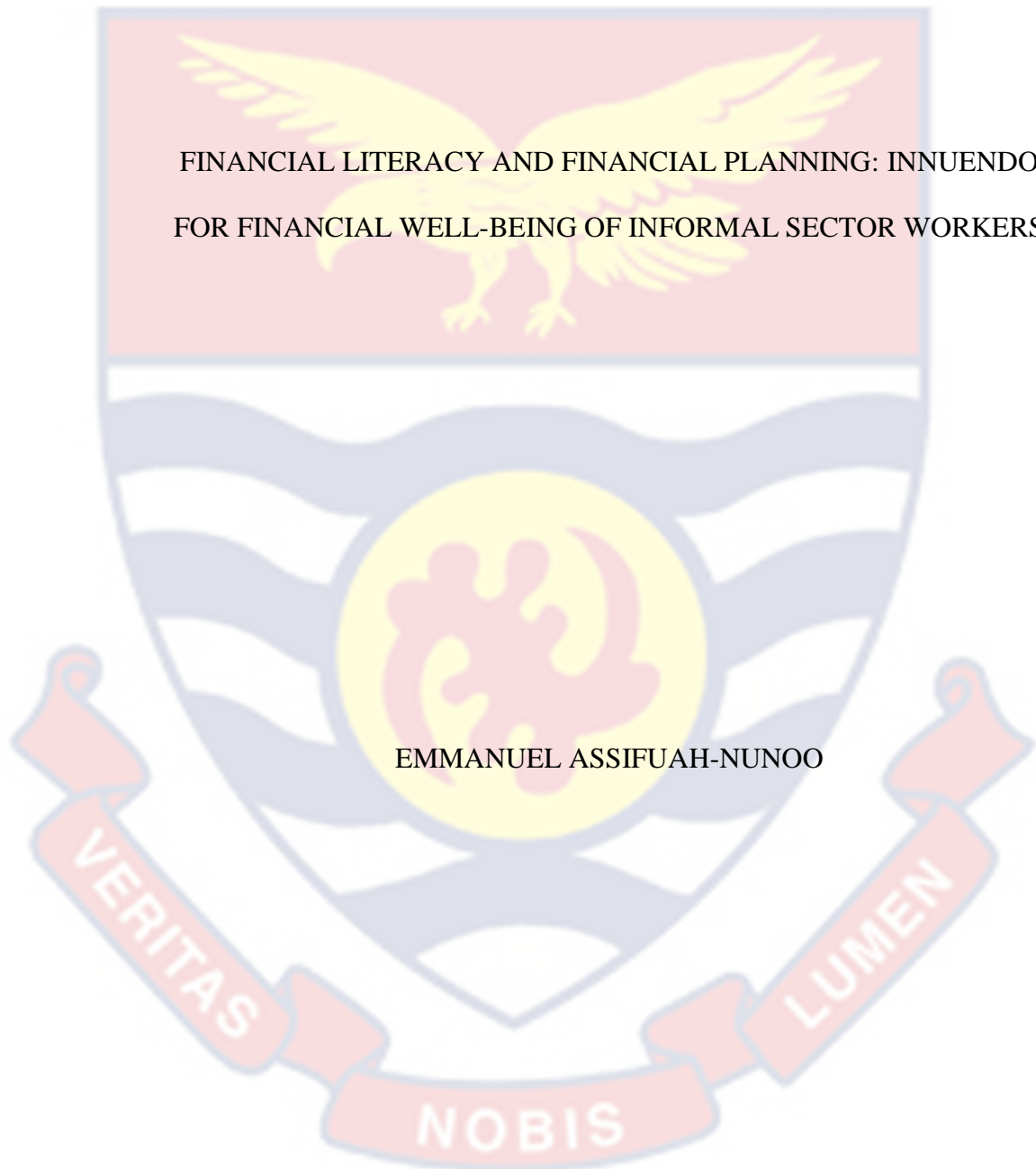


UNIVERSITY OF CAPE COAST



FINANCIAL LITERACY AND FINANCIAL PLANNING: INNUENDO  
FOR FINANCIAL WELL-BEING OF INFORMAL SECTOR WORKERS

EMMANUEL ASSIFUAH-NUNOO

2023

UNIVERSITY OF CAPE COAST

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BY

EMMANUEL ASSIFUAH-NUNOO

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

MAY 2023

## 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 the university or elsewhere.

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

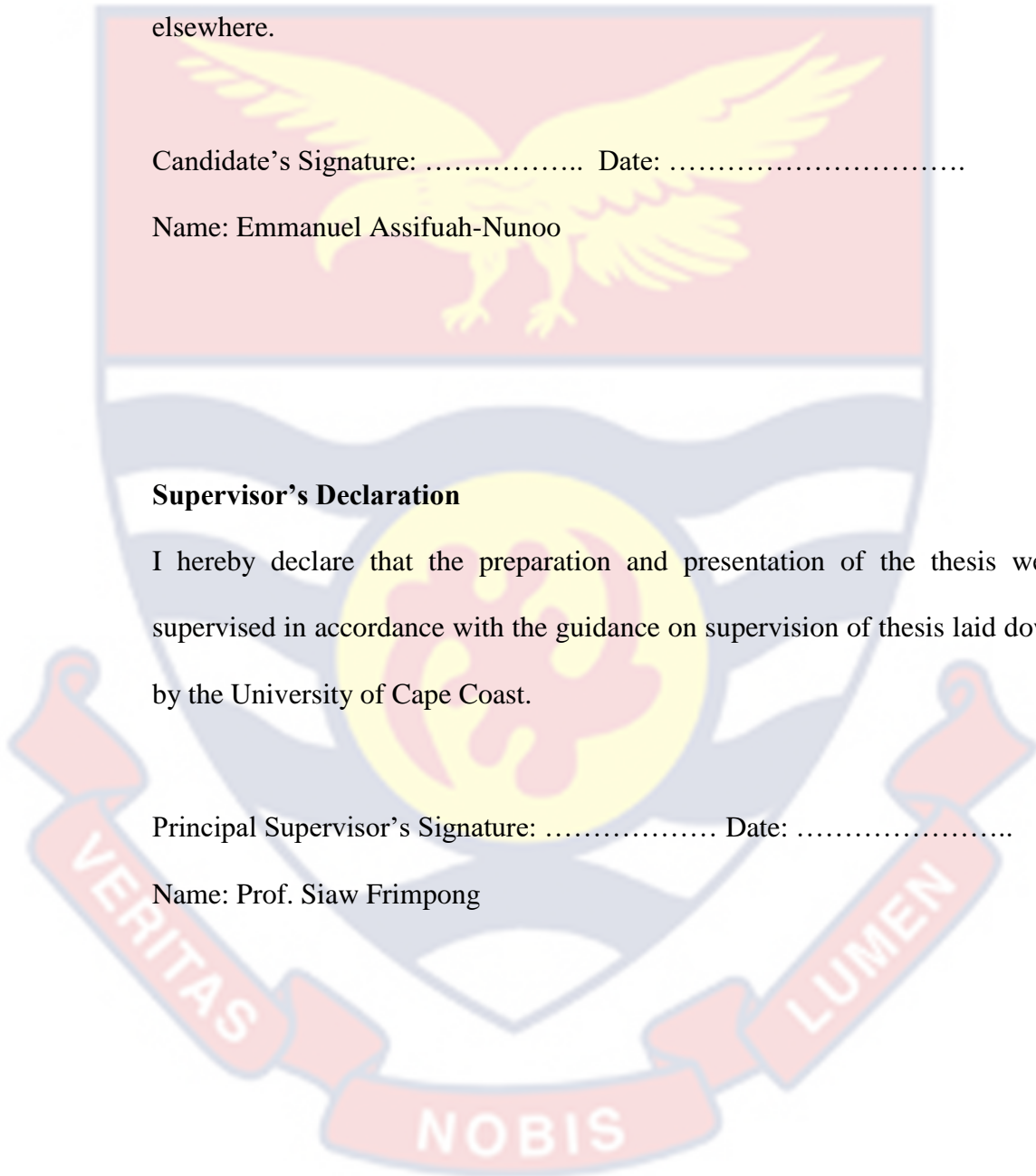
Name: Emmanuel Assifuah-Nunoo

### Supervisor's Declaration

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

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

Name: Prof. Siaw Frimpong



## ABSTRACT

This research sought to find out types of financial instruments informal sector workers have towards their future; willingness to prepare for retirement; elements that encourage informal sector workers to financially plan; and how financial literacy and financial planning influence the financial well-being of informal sector workers in Cape Coast and Elmina. The study employed quantitative method, where primary data was obtained in the month of August, 2022 by serving questionnaires to 408 participants in Cape Coast and Elmina, respectively. The data was analysed using SMART-PLS to observe the relationship between the variables. Path analysis was performed by the use of structural equation model (SEM). From the analysis, the study found a positive significant relationship between financial literacy and financial planning; financial literacy and financial well-being; and financial planning and financial well-being. The study also found a significant positive relationship between number of dependents and financial planning. These imply that if informal sector workers become financially literate and financially plan more, it will help enhance their financial well-being. It is, therefore, recommended that policymakers, financial institutions, and the government promote financial literacy and financial planning of the informal sector workers and also come up with/intensify existing financial policies that would better the financial well-being of the informal sector workers even when the number of their dependents rise.

## KEYWORDS

Financial Literacy

Financial Planning

Financial Well-being

Measurement Model

Path Analysis

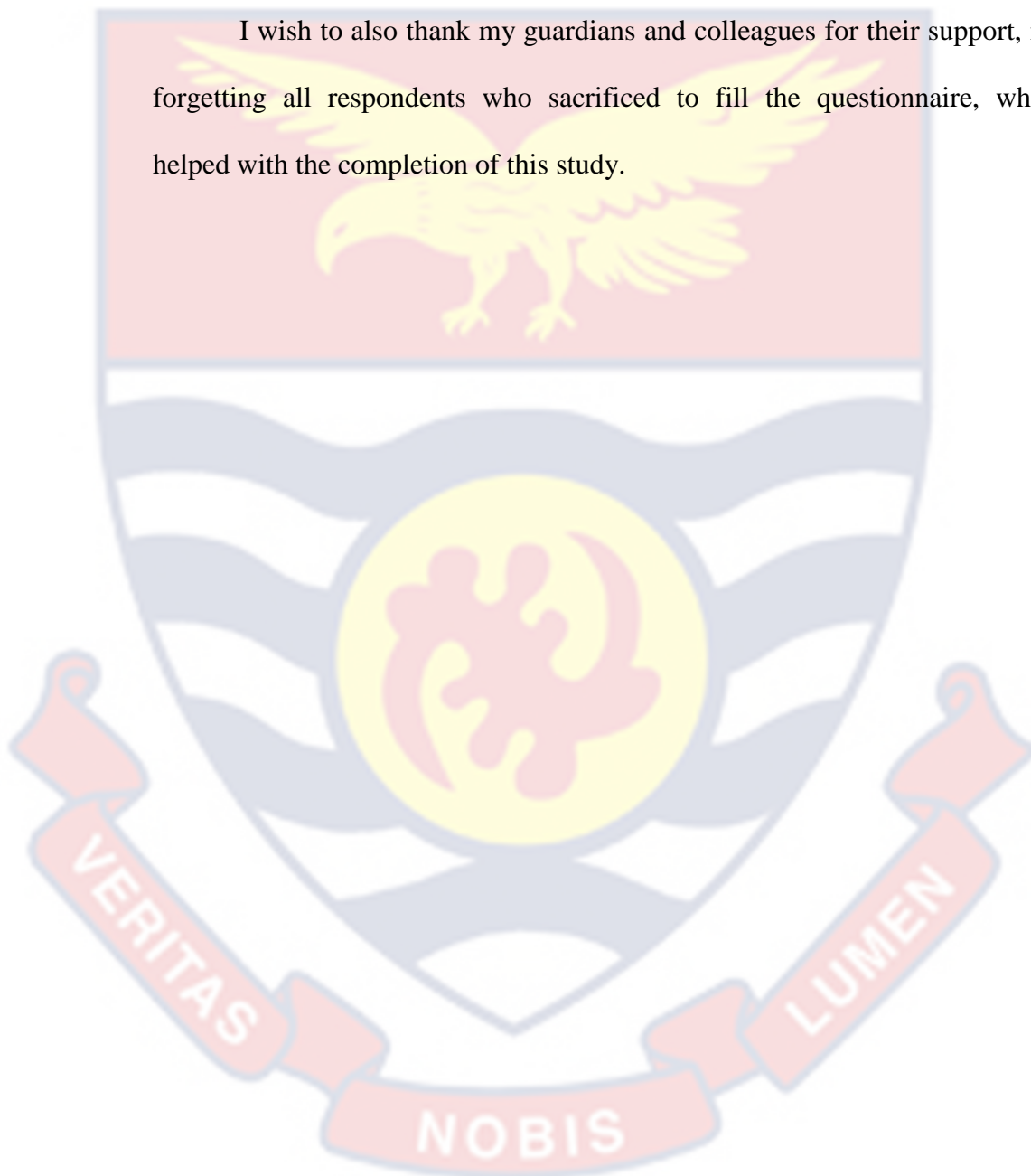
Structural Equation Model



## ACKNOWLEDGEMENTS

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I wish to also thank my guardians and colleagues for their support, not forgetting all respondents who sacrificed to fill the questionnaire, which helped with the completion of this study.



**DEDICATION**

To my family



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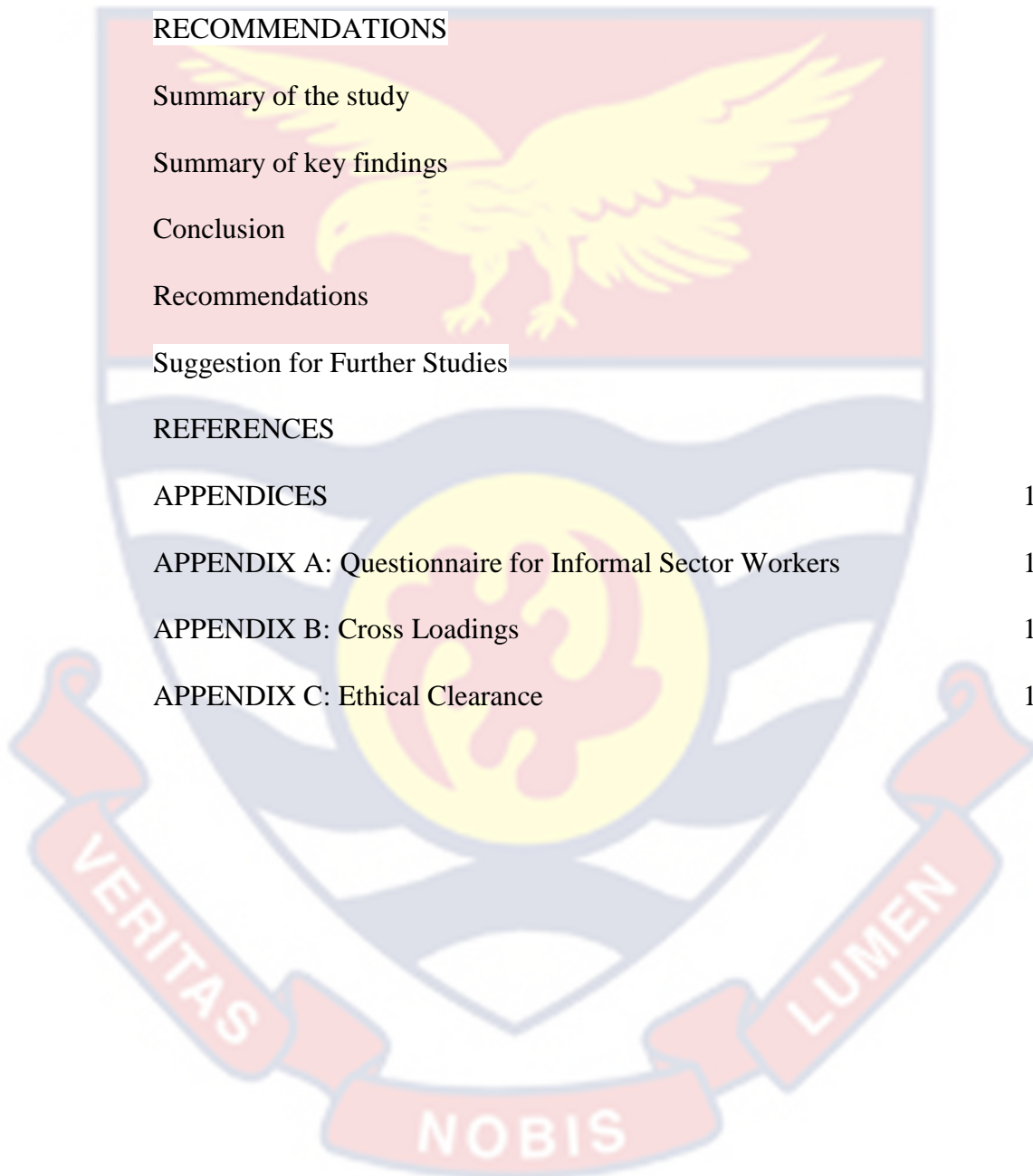
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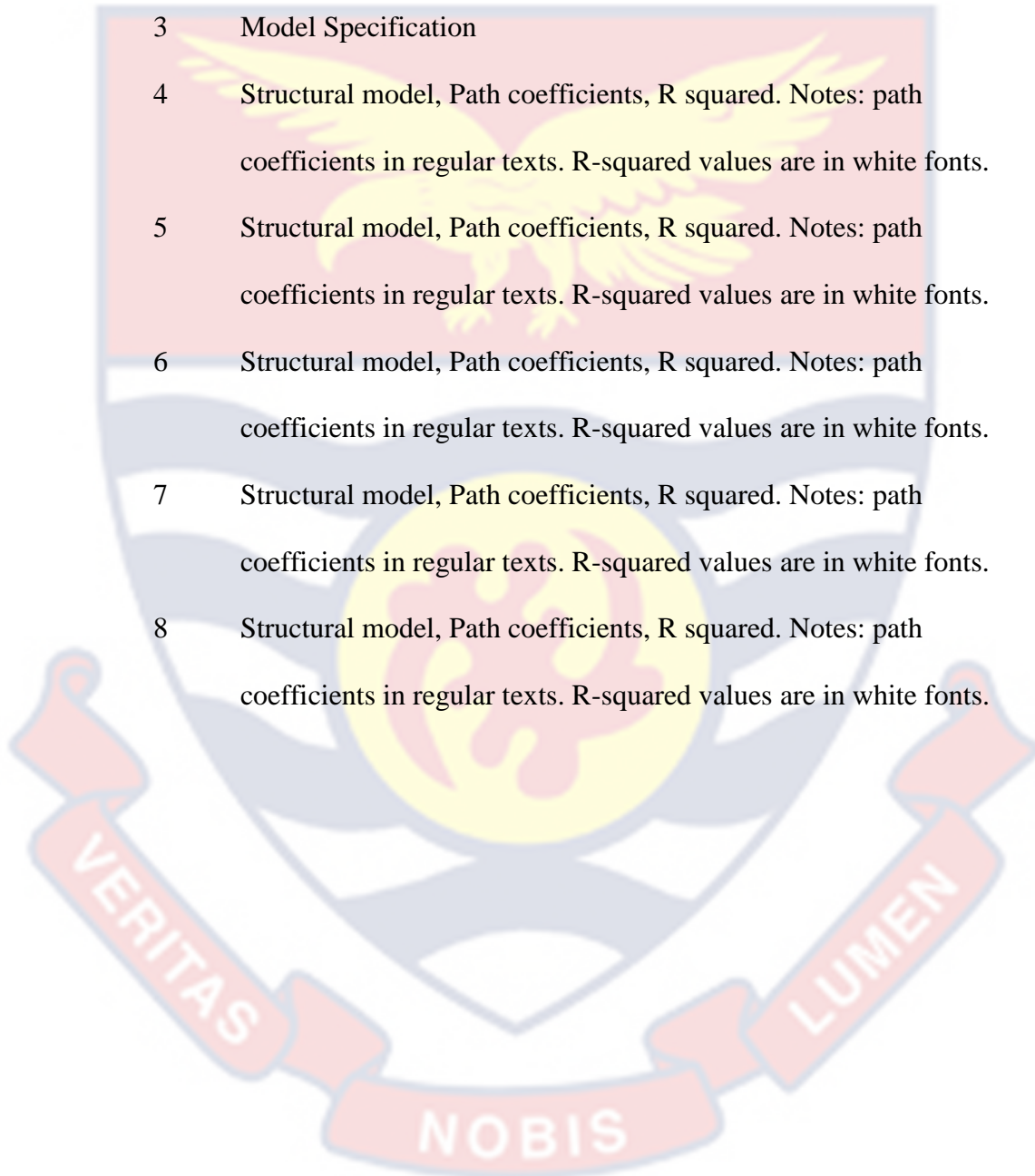


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## CHAPTER ONE

### INTRODUCTION

The ability to understand and apply the fundamental principles of finance is non-negotiable. It, therefore, seems to be in everyone's best interest to have some idea about finance and how it can affect lives but unfortunately, the majority of people seem to struggle to grasp the concept of finance and how that influences their financial planning and financial well-being. In view of this, this study is purposed to identify the types of financial instruments informal sector workers have towards their future; elements that encourage informal sector workers to plan financially; how financial literacy influences financial planning of informal sector workers; how financial literacy influences financial well-being of informal sector workers; how financial planning influences financial well-being of informal sector workers; the mediating role of financial planning in the relationship between financial literacy and financial well-being of informal sector workers; and the moderating effect of financial literacy on the relationship between financial planning and financial well-being.

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

The start of the colonial capitalism in the then Gold Coast seems to have been the year of the emergence of the informal sector in Ghana (Ninsin, 1991; Adu-Amankwah, 1999), but the turning point for studies on informal economies in developed and developing economies around the world is believed to have been influenced by the seminal work of Hart (1970) on urban informal sector in Ghana.

Review of literature on informal sector, after the seminal work of Hart (1970), points that although modernization seems to be on the increase, the informal sector has, over the years, been recording increase in both rural and urban areas of Ghana (Hormeku, 1998; Nyamekye, Koboré, Bonégo, Kiéma, Ndour, Jallo, & Tarawally, 2009; Osei-Boateng & Ampratwum, 2011; Gyasi, 2018) such that activities in the sector are now categorized into two main activities, namely, rural and urban activities. The rural activities of the informal sector, according to Ghana Statistical Service (hereafter GSS, 2021), centres around agricultural activities (fishing, fish processing, and farming) while the urban activities centres on non-agricultural activities (which comprises construction, services, and manufacturing activities).

By the year 1998, the size of the informal sector in Ghana was known to have grown to be eighty percent (80%) of the overall labor force (Hormeku, 1998) and by the year, 2009, employment in the sector was informed to be twice as that of the formal sector (Nyamekye et al., 2009), contributing about 70% of the Gross Domestic Product (GDP) of Ghana (Abor & Quartey 2010). The informal sector still seems to be experiencing a gradual increase (Osei-Boateng & Ampratwum, 2011; Gyasi, 2018). Statistics of working population, by the year 2015, showed that individuals employed in Ghana were about 9,270,939 (GSS, 2015) where a number of these individuals were noted to be in unguarded employments which are exposed to attacks. Out of the number of individuals employed, as indicated by the GSS labour force report in 2015, a little beyond 1.8 million were believed to be employed into government and private sector works with paid wages/salaries. About 843,194 individuals were also found to be working in businesses owned or managed by family members

without being paid, and over 5,987,073 (that is, over 5.9 million) were self-employed, revealing the quantum of persons who find themselves in the informal sector.

With this huge number (over 5,987,073) of informal sector workers in Ghana and their contribution to the GDP of the country, it is unfortunate that the daily minimum wage in Ghana, which is valued at GHS 13.53 (Vodicka, Nonvignon, Antwi-Agyei, Bawa, Clark, Pecenka, & LaMontagne, 2021; Bening, Kahlert, & Asiedu, 2022; Asravor & Sackey, 2022) seems almost impossible for some of the informal sector workers to make per day. On a general view, it is informed that many informal firms in developing countries would not be viable if they were to comply with the minimum wage law (Badaoui & Walsh, 2022). Review of literature actually points that some of the informal sector workers in Ghana who engage more in harmful activities are even not able to afford protective gadgets and because they have no other means of surviving, many are exposed to dangerous conditions that endanger their health and safety due to perceived low income. This raises concern on the financial matters of informal sector workers.

Financial well-being, at the individual, organizational and societal levels, has been revealed to have considerable implications (Netemeyer, Warmath, Fernandes & Lynch, 2018). According to Spuhlera and Dew (2019), one's perceived financial well-being plays a significant role in determining their degree of pleasure and quality of life, as well as their psychological health (Netemeyer et al., 2018). Agyei, Adam, and Agyemang (2019) found that personal wealth has an impact on both physical and mental well-being,



demonstrating the importance of financial well-being for people across all walks of life and not just those employed in the formal sector.

Apparently, increasing the financial well-being of both employees and customers as part of a company's corporate social responsibility strategy is known to frequently help establish a better reputation at the organizational level (Kim, 2019). It is believed that a company's performance and competitive advantage will grow further with increased corporate reputation (Foroudi, Cuomo, Foroudi, Katsikeas, & Gupta, 2019).

On societal level, financial well-being is informed to have significant societal ramifications since poor household financial condition frequently causes significant societal problems (Netemeyer et al., 2018; Bruggen, Hogreve, Holmlund, Kabadayi & Lofgren, 2017). Due to the fact that households control a sizable portion of a country's financial resources, it is believed that their financial situation has a considerable impact on the economy as a whole.

As financial well-being is very critical during the life time of individuals, it is of great concern to many researchers in many jurisdictions but in most of the studies on financial well-being, the formal sector tends to be more focused on as compared to the informal sector, among which it is established that responsibilities associated with number of dependents (nuclear family and extended family relatives) heads to minimum wealth holding which influences financial well-being of people (Wang & Hesketh, 2012; Lusardi & Beeler, 2006; Grinstein-Weiss, Wagner, & Ssewamala, 2006; Adam, Frimpong, & Boadu, 2017).

Studies by Adam, Frimpong, and Boadu (2017); Agyei, Adam, and Agyemang (2019); Oquaye, Owusu, and Bokpin (2020); and Matey (2021) as well as other studies on financial well-being concentrated on the formal sector with less concentration on the informal sector.

From empirical review of past studies on financial well-being, it is affirmed that financial well-being is influenced by financial literacy and financial behavior (Opoku-Boahen, 2016; Yankey, 2016; Asad, Hayat & Kanwal, 2017; Gunardi, Ridwan, & Sudarjah, 2017; Surendar & Sarma, 2017; Adam, Frimpong, & Boadu, 2017; Godwyll, 2018; Agyei, Adam, & Agyemang, 2019).

Financial literacy forms part of many essential factors of individual savings (Mahdzan & Tabiani, 2013). Adam, Frimpong, and Boadu (2017), Agyei, Adam, and Agyemang (2019) and Safari, Njoka and Munkwa (2021), posited that the level of financial literacy of individuals influences the rate at which one makes plans towards retirement. This is affirmed by Lusardi (2008) who revealed that ignorance about key financial concepts leads to lack of wealth and retirement planning and also posits that individuals with financial knowledge seem to plan for retirement and have good financial well-being but lack of literacy in finance and lack of information can affect the ability to save and secure a cozy retirement.

Sarpong-Kumankoma (2021) added to the literature that informs about the importance of financial literacy by stating that it is very prudent for individuals to possess the necessary skills in making good financial decisions looking at how the global economy keeps growing in uncertain trends. Actually, of all areas of functional literacy (being financial literacy, media

literacy, cultural literacy, health literacy, emotional literacy, and among others), Mihalcova, Csikosova, and Antosova (2014) informed that financial literacy is an important factor in making decision in all aspects of life. This is to mean that people who are more knowledgeable in finance are somehow able to plan towards the future by saving or people who are financially literate have the propensity to save for retirement and can, thus, be seen in the fact that they are able to set accurate and realistic retirement goals, device strategies and undertake profitable investment to be able to achieve those goals which in the long run help them to enjoy good financial well-being.

Additionally, Russell–Bennett, Mulcahy, Letheren, McAndrew and Dulleck (2020) posited that management of household finances is essential to foster psychological, social, and financial well-being of persons, throwing light on the level of importance of financial planning as it comes with life time benefits in many aspects of one’s life aside the influence of financial literacy. As a result, it is in a prudent way that individuals should have retirement goals, clear objectives and a clear strategy for how they will prepare and manage their savings (the act of putting money aside now for future needs), assets, and contribution plans once they reach retirement age before making the decision to retire.

Anyways, inasmuch as financial planning is believed to be apposite for well-being of individuals in many ways, many who are employed in the formal sector seem not to give much attention to financial planning (especially, retirement planning) and as a result, some people tend to be surprised at ages of retirement due to a fact that they could not save much towards retirement during early stage of working life (Alkhawaja & Albaity,

2020). Keating and Marshall (1980) posited that people actually seem not to be interested in retirement finances till somewhere around late 40s of their ages and this attitude of delayed financial planning usually leads to inadequate investments and savings which sometimes leads to discomfort even as retirees sometimes live for 25 to 30 years or longer after retirement in the midst of rising unstable economy (Ferraro & Su, 1999). Unfortunately, the case of the informal sector workers is less known.

Realizing the need for retirement planning, the government of Ghana initiated the Ghana National Pensions Act, 2008 (Act 766), by means of helping individuals plan financially towards retirement, and brought up a contributory three-tier where the three-tier consists a mandatory contribution plan that is fully funded and privately managed for occupational pensions, voluntary contribution provident fund and personal pension plan, and a mandatory contribution plan for employees that is managed by Social Security and National Trust.

Under this contributory three-tier, the private sector employers and the government of Ghana are obliged by the National Pensions Act, 2008 (Act 766) to take out 18.5% from the salaries of their workers in preparation for their retirement. This 18.5% is further divided into 13.5% and 5% and transferred to tier 1 and 2 pension schemes, respectively. The obligatory financial plan towards retirement seems to come with some benefits, being survivor's lump sum, invalidity pension and old-age pension.

The survivor's lump sum allows workers' dependents to receive money should the workers die before retirement or before the age of 75; the invalidity pension provides income to workers who have been certified by a medical

doctor as unable to work; and the old-age pension ensures that workers receive money after they retire. Nonetheless, the National Pensions Act, 2008 (Act 766) of Ghana seems to obligatorily support only those employed into the formal sector with the informal sector workers being given the option (not a compulsion) to personally plan financially towards their retirement (which is the tier 3).

Hu and Stewart (2009) pointed out that in some ways informal sector workers can be encouraged to participate in pension schemes through: (1) providing financial education to informal sector workers, as most informal sector workers do not join pension schemes due to lack of financial knowledge to understand the benefits of pension schemes; (2) providing monetary incentives to informal sector workers through tax breaks to encourage them to contribute to existing pension schemes; (3) relaxing the terms of pension schemes for informal sector workers to adapt if they find the contribution requirements to existing pension schemes unfavourable; and (4) introducing semi-mandatory and mandatory pension schemes to encourage informal sector workers to join pension schemes. However, the National Pensions Act 2008 (Act 766) does not appear to apply these strategies to increase informal sector workers' participation in pension contributions to a sufficient extent. It is such an unfortunate situation that the over 5,987,073 informal sector workers in Ghana seem not to be assisted to plan compulsorily towards retirement (Social Security and National Insurance Trust, 2020) although pension plans serve a significant role in reducing poor financial well-being among the most vulnerable members of society.

Accordingly, a key area requiring further exploration is financial literacy, financial planning, and financial well-being of the informal sector workers in Ghana.

### **Statement of the Problem**

Activities in the informal sector seem to be the survival means of lots of indigenes in Ghana, contributing greatly to the Gross Domestic Product (GDP) of the country (that is, 70% to the GDP). Nonetheless, little is known about the finances of the workers in the informal sector. The financial issues of the informal sector workers with regards to financial well-being, financial planning, financial concerns, financial literacy and among others is less known.

Few studies about the finances of the informal sector workers have looked at poverty, microfinance, financial literacy and retirement planning of the informal sector workers. Among the past studies in Ghana in the area of finance regarding the informal sector that considered variables like poverty, microfinance, financial literacy and retirement planning, the most recent seem to be studies on financial literacy, microfinance and performance of artisanal fishermen (Amenuku, 2018); Cocoa farming business, financial literacy and social welfare of farmers in Brong-Ahafo Region of Ghana (Adu-Asare, 2018); and financial planning for retirement of self-employed workers in the Ghanaian economy (Ofori, 2021).

These studies were done with focus on individuals in only one or two activities (mostly fishing or farming) in the informal sector, neglecting all other persons in the other activities of the informal sector. The issues of

poverty, microfinance, financial literacy and retirement planning of workers from other activities of the informal sector have not been studied yet.

Forasmuch as financial well-being predicts standard of living and enhances production which leads to economic growth (Adam, Frimpong & Boadu, 2017; Agyei, Adam, & Agyemang, 2019), the financial well-being of the informal sector workers have not really been considered in past literature. As informal sector workers are the most of the employed in the country and contribute greatly to the economy of Ghana, a good level of financial literacy, financial planning and financial well-being may help them contribute more to society and the economy at large.

Moreover, indicators that affect the financial well-being of the informal sector workers have also not been observed. Most of the studies in relation to finance about the informal sector have not really looked at the financial planning and financial well-being in detail. Until now, no study seems to have been found looking at the financial literacy and financial well-being of informal sector workers and the influence of financial literacy and financial planning on financial well-being of informal sector workers in all informal activities.

Aside that, the mediating role of financial planning in the relationship between financial literacy and financial well-being and the relationship between number of dependents and financial well-being has not been looked at in the informal sector context. The moderating role of financial literacy on the relationship between financial planning and financial well-being of the informal sector workers has also not been addressed yet by any study. In addition, the impact of demographic elements like level of education, age and

number of dependents on the financial literacy, financial planning, and financial well-being of informal sector workers in Ghana is also less known, as compared that of formal sector workers. This leaves room for other activities in the informal sector to be studied in terms of financial literacy, financial planning and financial well-being.

In general, review of literature shows that very minimal research is found on informal sector workers with respect to financial literacy, financial planning and financial well-being as compared to that of the formal sector workers. Less is what is known about the types of financial instrument that informal sector workers have towards their future, the key factors that encourage informal sector workers to financially plan, how financial planning, financial literacy, age, education, and number of dependents influence the financial well-being of informal sector workers in various informal activities in Ghana.

As a market economy of a country can be said to function well when the citizens are more future concerned and are financially sound, a research on the financial literacy, financial planning and financial well-being of informal sector workers seems prudent to be carried out.

### **Purpose of the Study**

The main purpose of the study was to analyse the relationship between financial literacy, financial planning, and financial well-being of informal sector workers in Cape Coast and Elmina.

### **Research Objectives**

Specifically, the study sought to:



1. assess the relationship between the financial literacy and financial planning; and
2. examine the relationship between financial literacy and financial well-being of informal sector workers in Cape Coast and Elmina.
3. examine the relationship between financial planning and financial well-being of informal sector workers in Cape Coast and Elmina.
4. analyse the mediating role of financial planning in the relationship between financial literacy and financial well-being of informal sector workers in Cape Coast and Elmina.
5. examine the moderating effect of financial literacy on the relationship between financial planning and financial well-being in Cape Coast and Elmina.

### **Research Hypotheses**

Based on the objectives, the study hypothesized the following:

H<sub>1</sub>: There is a positive relationship between financial literacy and financial planning of informal sector workers in Cape Coast and Elmina.

H<sub>2</sub>: There is a positive relationship between financial literacy and financial well-being of informal sector workers in Cape Coast and Elmina.

H<sub>3</sub>: There is a positive relationship between financial planning and financial well-being of informal sector work in Cape Coast and Elmina.

H<sub>4</sub>: Financial planning mediates the relationship between financial literacy and financial well-being of informal sector work in Cape Coast and Elmina.

H<sub>5</sub>: Financial literacy moderates the relationship between financial planning and financial well-being of informal sector workers in Cape Coast and Elmina.

### **Significance of the Study**

Results drawn from the study call for the attention of governments and financial institutions to come up with or intensify already existing financial policies that would help individuals in the informal sectors to have a structured plan regarding their finances in order to enjoy good financial well-being. The outcome also calls for more education on available optional pension contribution plan for informal sector workers. Financial well-being is a critical component of overall well-being and can contribute to poverty alleviation. By demonstrating the positive link between financial planning and financial well-being, your study suggests that supporting informal sector workers in developing effective financial plans could help improve their economic stability, reduce financial stress, and potentially lift them out of poverty. This finding underscores the potential socio-economic benefits of empowering individuals with financial knowledge and skills. Moreover, the study adds knowledge to literature and also serves as basis for further work in the crucial area for research.

### **Delimitation**

The study investigated the level of financial literacy, financial planning and financial well-being of only informal sector workers (rural and urban activities) within the Cape Coast and K.E.E.A Metropolis (specifically, Cape Coast and Elmina) in the Central Region.

On the extent of financial literacy, the study focused on the indicators of financial literacy, being financial knowledge, financial skills, financial attitude and financial behaviour. With financial planning, the study focused on types of financial planning employed by the workers, financial budgeting,

savings plan, investment planning and preparation towards retirement not neglecting the willingness to participate in retirement planning what encourages the informal sector workers to plan financially. On financial well-being, the study focused on ability to meet some basic financial needs and satisfaction of standard of living and the impact of number of financial dependents on financial well-being.

### **Limitation**

The level of education seems to be low in the region and that lead to difficulty and more time spent in the collection of data as the researcher had to make copious time to explain some of the questions on the questionnaire to the respondents before they could answer them. For most of the respondents, the researcher had to ask the questions and tick the corresponding responses chosen by the respondents on behalf of the respondents due to the fact that they could not fill the forms themselves. On methodology, employing mixed-method approach may add more volume to the study.

### **Definition of Terms**

#### **1. Financial well-being**

Financial well-being is defined to be a condition where an individual is capable of providing some present and on-going needs/responsibility, being happy about the current income or expenditure, have safe and sound mind regarding the future in terms of finance, and can also select among choices that allow life to be enjoyed (Organization for Economic and Co-operative Development [OECD], 2015; Shams, 2016).

## 2. Financial Literacy

Informed by Remund (2010), the degree to which a person comprehends concepts in finance and has the means and boldness to manage personal finances by the right short-term decision-making and right long-term financial planning along being conscious of events of life and erratic economic conditions is what defines financial literacy. In simple terms, financial literacy can be defined as the means to comprehend the operation of money, means by which one obtains money and how to manage money by spending, saving or investing.

## 3. Financial Planning

Financial planning revolves around taking into consideration the personality of individuals, socioeconomic and legal environments and financial status of persons, the adoption of strategies and employing concepts and means that helps in obtaining financial goals (Richards & Safari, 2021).

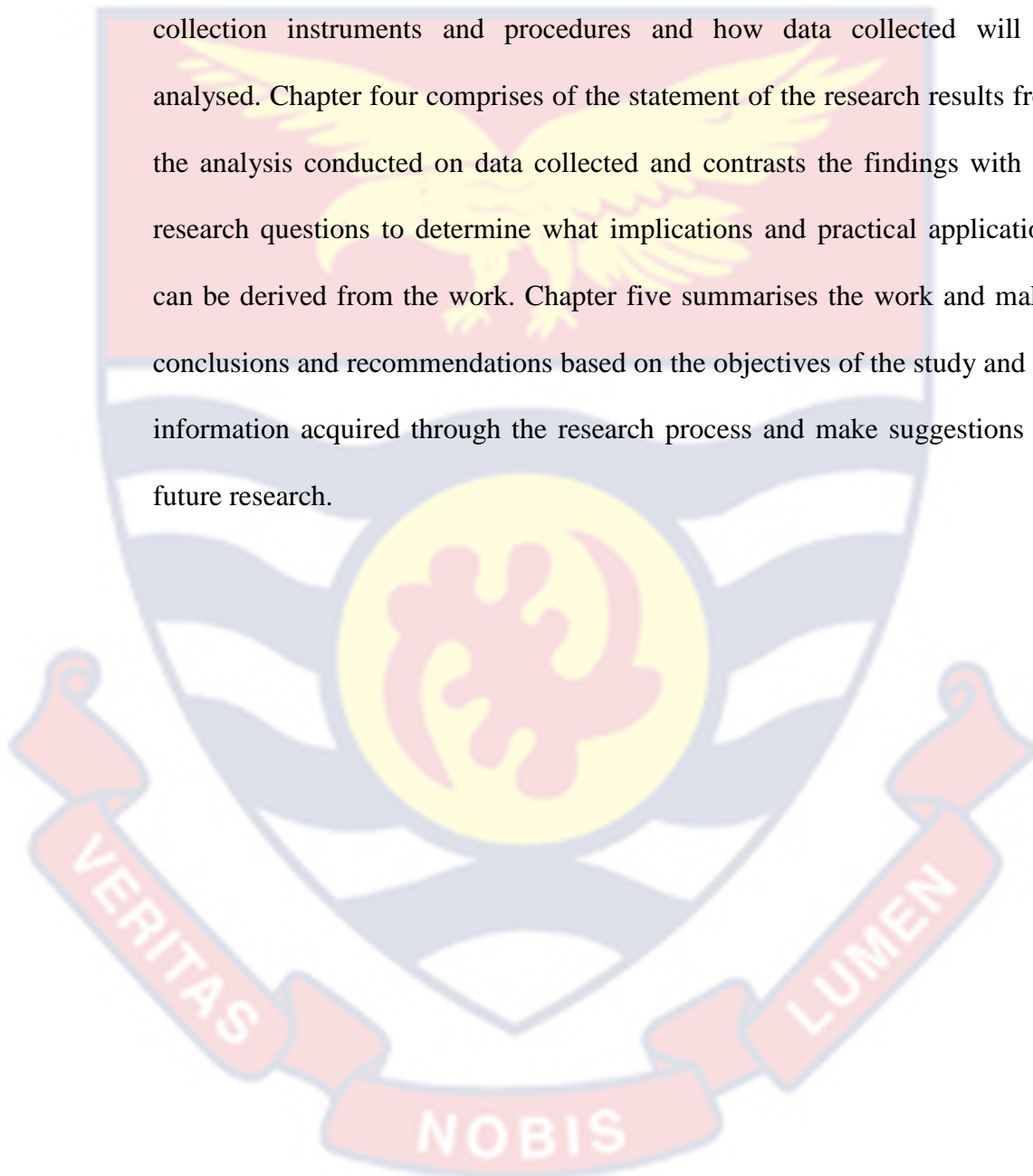
## 4. Informal Sector

By definition, the informal sector is seen as unregulated economic activities (Hart, 1973) or economic activities that contribute to the officially calculated Gross National Product (GNP) but not registered (Feige, 1990).

## Organization of the Study

The study is organised into five chapters. Each chapter addresses a separate section of the study. Chapter one is the introduction of the study, giving an overview of the background, purpose, objectives, and significance of the study. It also includes definitions of some key terms used in the study.

Chapter two provides a theoretical and empirical review of the study, and places it within the existing body of work. Chapter three outlines the research design that was employed in this study, the study area, the population and sample which was used to gather the data for analysis. It also defines the data collection instruments and procedures and how data collected will be analysed. Chapter four comprises of the statement of the research results from the analysis conducted on data collected and contrasts the findings with the research questions to determine what implications and practical applications can be derived from the work. Chapter five summarises the work and makes conclusions and recommendations based on the objectives of the study and the information acquired through the research process and make suggestions for future research.



## CHAPTER TWO

### LITERATURE REVIEW

#### Introduction

This study sought to analyse the relationship between financial literacy, financial planning, and financial well-being of informal sector workers in Cape Coast and Elmina. This section looks at several studies in line with the topic under study that seem essential to understand financial literacy, financial planning and financial well-being of informal sector workers. The section is ordered as follows: theoretical review [taking in account, theories underlying financial planning and financial well-being], empirical review and conceptual framework.

#### Theoretical Review

All studies are underpinned by a theoretical and conceptual framework (Akpabio & Uyannah, 2015; Imenda, 2014). Frameworks give the researcher structural direction for creating research questions, choosing the best methodology, and properly interpreting the data gathered (Akpabio & Uyannah, 2015; Imenda, 2014). A theoretical framework is further said to be the specific theory or ideas that are chosen by a researcher to influence the course of a research and after using the principles from the chosen theory or theories, the research topic is resolved (Imenda, 2014). Imenda (2014) further asserted that frameworks assist in providing a visual representation of the research process to the audience. This tends to emphasize that the theories chosen must be pertinent to the research and related to its main objectives.

Over the years, theories employed to connect financial literacy, financial planning and financial well-being are that of theory of human capital,

life-cycle theory, social support hypothesis, self-determination theory, self-efficacy theory, goal-setting theory, cognitive-affective processing system and among others. Among these listed theories, human capital theory (Becker, 1962), life-cycle theory (Modigliani & Brumberg, 1954; Friedman, 1957), cognitive-affective processing system (Mischel & Shoda, 1995), and social support hypothesis (Cohen & Wills, 1985) provide the theoretical foundation for this study to understand the financial well-being of informal sector workers.

### **Human Capital Theory**

The human capital theory highlights the role of education, training, and skills development in enhancing people's productivity and earning potential (Becker, 1962). This theory is useful in investigating the relationship between financial literacy and financial planning and also the relationship between financial literacy and financial planning.

The theory suggests that people who possess financial literacy (knowledge/skills) are better equipped to make informed decisions about their finances and plan for their future financial needs. The theory suggests that financial literacy can improve people's financial well-being. Thus, the theory also supports that financial planning mediates the relationship between financial literacy and financial well-being.

Financial literacy is a multi-dimensional construct that has been operationalized in academic literature. It includes knowledge of financial products, having the mathematical abilities or numeracy required for effective financial decision making, knowledge of financial concepts, and engaging in financial behavior like financial planning (Wise, 2013). This study aims to

provide an assessment of how financial literacy of informal sector employees influences their financial planning and financial well-being using this theoretical model. The pervasive lack of financial literacy raises serious concerns for policymakers, according to the evaluation of the human capital theory.

### **Life Cycle Theory**

Modigliani introduced the life cycle theory in two research articles written in the 1950s (Modigliani & Brumberg, 1954; Friedman, 1957). The theory suggested that people make informed choices about the amount to devote for spending during each period of their life. The life-cycle model assumes optimization of consumption smoothing, decision making under certainty, and lifetime utility.

In other words, assumptions that people are sagacious, circumspect and also rightly informed about the various factors which contribute to wealth amassment, are the central predictions that the life-cycle theory rests on (Modigliani & Brumberg, 1954; Friedman, 1957). According to the theory, a person saves money when they are young but spends more throughout their prime earning years and refrains from saving money for retirement. The idea goes that people save more money in their middle years so they can continue to consume as much when they retire (Kenton, 2020).

### **Cognitive-Affective Processing System**

The cognitive-affective processing system by Mischel and Shoda (1995) posit that individuals process information through two systems (that is, cognitive system and affective system). The cognitive system involves rational



and deliberate thinking whereas the affective system involves emotional and intuitive processing.

The theory is useful in investigating the moderating effect of financial literacy on the nexus between financial planning and financial well-being. Financial literacy is believed to enhance the cognitive system by increasing an individual's ability to process and understand financial information. Financial planning is also a rational and deliberate process associated with cognitive system. In contrast, financial well-being is related to affective system as it involves emotions such as satisfaction, happiness, and security. Thus, Financial literacy moderates the relationship between financial planning and financial well-being as it enhances the cognitive system which leads to the affective system.

#### **Social Support Hypothesis**

According to Cohen and Wills (1985), there is a positive correlation between social support and wellbeing because it has a generalized beneficial effect or shields recipients from the negative effects of stressful circumstances. Both internal and external financial resources can be used to meet personal financial obligations. For the majority of developing nations, family support and other external social support may be more significant external financial sources than borrowing. Evidence abounds that wealthy family members and community leaders provide education, health care, housing and other personal maintenance to others, even beyond their extended family relationships. In fact, the rich take pride in providing social support for the needy.

### **Self-determination Theory**

According to the self-determination theory, people's wellbeing can be boosted when their psychological demands for autonomy, connection, efficacy, or competency are met (Ryan & Deci, 2000). The need for affiliation with other people is asserted by connection, but autonomy displays the individuals' independence to control and engage in particular actions. The perceived assessment of one's capacity to deal with particular circumstances is known as perceived competency or self-efficacy (Farrell, Fry, & Risse, 2016). Self-efficacy, in particular, in the area of consumers' finances, reflects a person's capability to deal with financial services (Sorgente & Lanz, 2017) and manage their finances (Limbu & Sato, 2019).

### **Conceptual Review**

This section looks at the conceptual review underlying the study.

### **Financial Literacy**

Remund (2010) posited that financial literacy is the means to comprehend the operation of money, means by which one obtains money and how to manage money by spending, saving or investing. Globally, financial literacy is considered to be high in the developed financial markets such as Germany, Canada, United States of America, Japan, Italy, New Zealand and Sweden with financial literacy rates of 53%, 42%, 30%, 27%, 25%, 24% and 21% respectively (Lusardi & Oggero, 2017).

Although the general population have high financial literacy rates, other researches have shown that the older population in these countries have low financial literacy. People who are educated are expected to be financially literate, however, being educated does not necessarily mean the person is

financial literate. Financial distress of many are as a result of low level of financial literacy although they are educated (Niu & Zhou, 2018; Boisclair, Lusardi & Michaud, 2017; Bucher-Koenen & Lusardi, 2011; Moure, 2016; Almenberg & Save-Soderbergh, 2011; Sekita, 2011; Crossan, Feslier, & Hurnard, 2011; Fornero & Monticone, 2011; Lusardi & Mitchell, 2011).

The case of financial illiteracy in Ghana is not so different with evidence from studies by Ansong and Gyensare (2012), Yankey (2016), Opoku-Boahen (2016), Adam (2017), Adam, Frimpong, and Boadu (2017), Adam, Boadu, and Frimpong (2018), Godwyll (2018), Agyei, Adam, and Agyemang (2019), and Gyasi, Adam and Phillips, (2019) where Adam, Frimpong, and Boadu (2017) points to how financial illiteracy influences the financial well-being of retirees.

With all the studies on financial literacy across the globe, it is quiet unfortunate that the relationship between financial literacy, financial planning (such as investments, loan management, creation of wealth, savings and planning towards retirement) and financial well-being have received less attention, particularly in developing economies or financial markets like Ghana (Niu & Zhou, 2018) and also on the informal sector workers.

### **Financial Planning**

Financial planning revolves around taking into consideration the personality of individuals, socioeconomic and legal environments and financial status of persons, the adoption of strategies and employing concepts and means that help in obtaining financial goals (Richards & Safari, 2021).

Financial planning is believed to determine the purchasing power of households and even some other decisions in life like education, marriage, and

bearing and upbringing of children. This shows the level of importance of financial planning (Guzman, Paswans & Tripathy, 2019). Financial planning comprise an extensive evaluation of an individual's present and future financial status. This is a multifaceted process that encompasses a wide range of tasks, including savings, cash flow management, tax planning, investments, insurance planning, real estate management, and retirement planning (Kumar, Tomar and Verma, 2018).

Over the years, it has been affirmed that financial planning ensures social, psychological and financial well-being of persons. Financial planning comes with life time benefits in many aspects of one's life. Individual future preferences for current expenditure as well as future income prospects are also believed to influence the amount of money saved (Russell–Bennett, Mulcahy, Letheren, McAndrew & Dulleck, 2020). According to Murphy (2009), a pressing concern for most people planning for retirement is outliving their incomes and assets so that they don't run out of money during their lives, especially during retirement. As a result, it is informed as prudent for individuals to have retirement goals, clear objectives and a clear strategy for how they will prepare and manage their savings (the act of putting money aside now for future needs), assets, and contribution plans once they reach retirement age before making the decision to retire.

### **Empirical Review**

This section reviews previous studies conducted by earlier researchers about the research topic under study, comparing, contrasting and critiquing to draw out possible gaps in literature.

## Financial Literacy and Financial Planning

Among the studies that looked at the relationship between financial literacy and financial planning, Selvadurai, Kenayathulla and Siraj (2018) considered the factors that influence financial literacy and the impact of financial literacy on financial planning. It was revealed that factors in psychology such as goal-setting (monetary), betimes financial exposure and financial consciousness influences the aged in increasing literacy in finance, and, in the long run, influences financial retirement planning. Nonetheless, the study could not account for what encourage people to financially plan aside financial literacy influencing financial planning.

The findings of Selvadurai et al. (2018) about the influence of financial literacy on financial planning seem to be in line with that of by Hutaarat and Wijaya (2020) and Adegbite, Machethe, and Anderson (2021). Nonetheless, Kumar, Shukla and Sharma (2019) and Mahdzan, Mohd-Any and Chan (2017) revealed that barriers/interruptions for the achievement of individual retirement goals seem to include not only financial literacy but also, policy regulations, level of income, gender, marital status, level of education, and number of financial dependents, as well as future expectations.

In a study by Kumar, Tomar and Verma (2019), there was an indication of deficiency in (financial) management amongst women and their susceptibility to poverty in post-retirement years due to some low level of education of most of the women. Other studies affirm the impact of education on financial planning for retirement. One of the studies that affirm the relation between the level of education and financial planning is that of Kumar, Shukla and Sharma (2019) who revealed that level of education influences financial

planning for retirement. Jimenez, Chiesa and Topa (2019) also affirmed that high level of education contributes to greater level of financial planning for retirement. Anyways, the influence of level of education on financial planning of informal sector workers is less addressed.

Employing a structural equation modeling in a study on retirement saving behaviour, Alkhawaja and Albaity (2020) posited that future time perspective and knowledge of financial planning for retirement have a relevant positive impact on retirement saving behavior. However, financial risk tolerance has a negative impact on retirement saving behavior. Also, in attempt to analyse the impact of financial literacy, age, education and income levels, future time perspective and financial risk tolerance on retirement planning of female workers Larisa, Njo and Wijaya (2020) revealed that income, future time perspective and financial literacy seem to influence people's view towards retirement planning but the types of financial plans adopted for retirement was not addressed by the study.

Safari, Njoka, and Munkwa (2021), examined the impact of financial literacy on personal retirement planning of public sector workers and found that financial literacy has a significant impact on personal retirement planning of the public sector workers. However, the impact of financial literacy on financial well-being was not addressed. Moreover, the case of informal sector workers was not addressed. The study was just limited to public sector workers.

Investigating the effect of financial literacy on savings and retirement planning of formal sector workers in Ghana, Sarpong-Kumankoma (2021) revealed that many people have inadequate knowledge in basic financial

concepts. The study further revealed that financial literacy positively impacts the chance of saving towards retirement and that the young, the old, women, low-income earners and the less educated performed worse on financial literacy measures. This study failed to address the influence of financial literacy on financial well-being of informal sector workers.

### **Financial Planning and Financial Well-Being**

Ponchio, Cordeiro, and Gonçalves (2019) explored the impact of consumer spending self-control (CSSC), materialism, personal saving orientation, time perspective (TP) and financial knowledge on consumers' perceived financial well-being in Brazil. The research showed that current money management stress and future financial security (which seem to be the two dimensions of financial well-being) are predicted by CSSC, materialism and TP; personal saving orientation also predicts future financial security. Time perspective was also found to moderate the effect of materialism on current money management stress, and CSSC mediates this relationship.

Looking at subjective financial knowledge, prudent behaviour and income, as predictors of financial well-being, Riitsalu and Murakas (2019) revealed that level of income and financial behavior correlate with financial well-being and, also, subjective knowledge has a stronger relation with financial well-being as compared to objective knowledge. However, the impact of financial literacy on financial planning was not addressed by the study.

### **Impact of financial literacy and financial planning on financial well-being**

Over the years, many factors have been said to influence financial well-being. Losada-Otálora and Alkire (2019) conducted a research in

Columbia, out of 5 banks, a study on 400 bank customers to evaluate the mechanisms by which bank information transparency influences consumer's financial well-being by the use of serial moderation analysis revealed that bank information transparency can positively enhance the financial well-being of customers due to the fact that the shared information improves the positive attitudes toward banks and the perceived financial self-efficacy of customers.

Wang and Hesketh (2012) found in their study that family related factor does not contribute positively to the financial well-being of individuals, especially those in retirement. A study by Lusardi and Beeler (2006) also indicated that responsibilities that come with having more children head to minimum worth holding. This proposes that the number of dependents a worker has may have effect on the fiscal well-being of the worker.

Adding to the impact of number of dependents on financial well-being, Grinstein-Weiss, Wagner, and Sewamala (2005) revealed that families with dependent children as compared to other families seem to have economic difficulties. The case of Ghana in terms of impact of number of dependents on financial well-being is only attributed to the work of Yeboah (2002), who emphasized in the outcome of a study that care for the young dependents is a great issue the aged face. Nevertheless, the current influence of number of dependents on financial well-being of individuals in Ghana can be traced to the work of Adam, Frimpong and Boadu (2017) but their study was limited to only retirees of the formal sector in the Cape Coast Metropolis of the Central Region in Ghana.

Chatterjee, Kumar, and Dayma (2019) conducted a study to look at the impact of perceived income security, socially driven aspirations and



materialistic values of youths as factors that influence financial well-being. The study revealed that unemployment negatively influences financial well-being to a large extent but on the contrary, income security and stable employment positively impacts financial well-being.

Nandru, Chendragiri, and Velayutham (2021) investigated the determinants of financial inclusion and the effect of financial inclusion on the financial well-being of marginalized street vendors. By using a confirmatory factor analysis (CFA) and structural equation modeling (SEM) the study revealed that availability, accessibility, use, and affordability were significant determinants of financial inclusion, but the literacy dimension was found to be statistically insignificant. Furthermore, the results of this study also confirmed that financial inclusion contributes significantly to the well-being of marginalised street vendors.

Soepding, Munene, and Dang (2020), having used confirmatory factor analysis, exploratory factor analysis, and structural equation modeling to analyse data, found that social capital and risk management are significant predictors of retirees' financial well-being. This study did not look at the impact of financial literacy on financial well-being neither did it look at the impact of financial planning on financial well-being.

Talking about studies that considered financial literacy as an influence on financial well-being, Joo and Grable (2004) and Taft, Hosein, Mehrizi and Roshan (2013) posited that there is a significant relationship between financial literacy and financial well-being. Not only does financial literacy influence financial well-being. Life experience in the early stages, contextual factors, development factors and adaptation mechanisms are all said to contribute to

the financial well-being of persons, more specifically, elderly people (Prakitsuwan, Moschis, & Shannon, 2020). Ianole-Calin, Hubona, Druica, and Basu (2021) also indicated in their study in Romanian post-communist context, that financial well-being is significantly influenced by financial education and to a set of non-cognitive factors.

Agyei, Adam, and Agyemang (2019) examined the role that cultural values (Protestantism and Catholicism) played in explaining the financial well-being of small- and medium-sized business (SME) owners in Ghana. It was found that these owners' financial literacy tends to have a positive impact on their financial well-being. A little evidence was discovered to support the claim that culture modifies the association between financial literacy and financial well-being. Additionally, it was revealed that protestant ideology weakens SME Owners' ability to acquire financial riches.

Oquaye, Owusu, and Bokpin (2020), examined the impact of financial behaviour, which is an indicator of financial literacy, and financial self-efficacy on financial well-being. The study found that individuals with high level of financial self-efficacy practice responsible financial behavior and found financial behavior to be a good predictor of financial well-being. The study also revealed that financial behavior mediates the relationship between financial self-efficacy and financial well-being. The finding can be said to be similar to that of Tahir, Ahmed, and Richards (2021), who found that financial capability partially mediates the association between financial literacy and financial well-being. It is also similar to that of Mahendru (2020) who posits that behavioral economics influences financial well-being. However, this

study was not opened to factors that contribute to poor financial behaviour. It was also limited more to individuals in the formal sector.

Observing the impact of some indicators of financial planning and financial literacy on financial well-being, Soepding, Munene, and Abaho (2021) showed that there exists a significant relationship between financial self-efficacy, financial attitude and financial well-being of retirees. Their findings also indicated that educational qualification had significant effects on the financial well-being of retirees but this is the case of retirees in Nigeria.

The case of Ghana concerning retirees in the area of financial well-being is informed by Adam, Frimpong, and Boadu (2017), where they informed that financial literacy and financial planning of retirees influence their financial well-being. However, the study of Adam, Frimpong, and Boadu (2017) was limited to only public sector retirees in the Cape Coast Metropolis of the Central Region in Ghana, failing to account for the case of retirees of the informal sector.

Overall, it is affirmed that financial well-being is a function of financial literacy and retirement planning (Lusardi & Mitchell, 2011) but the case of Ghana concerning the informal sector is less known.

### **Moderating effect of financial literacy**

Ahmad and Shah (2020) conducted a study on overconfidence heuristic bias in investment decision-making and revealed that financial literacy moderates the relationship between overconfidence and investment decision-making and also, financial literacy moderates the relationship between overconfidence and investment performance. Sabir, Mohammad, and Shahar (2019) also performed a study on the role of overconfidence and past

investment experience in herding behavior with a moderating effect of financial literacy. The study revealed that financial literacy has a moderate impact on the relationship between cognitive profile and herding behavior. However, a study by Hayat and Anwar (2016) looked at moderating role of financial literacy on the impact of behavioral biases on investment decision. The study revealed that financial literacy has negative moderating role in herding bias and positive moderating role of overconfidence bias in investment decision.

Mutlu and Özer (2021) looked at the moderator effect of financial literacy on the relationship between locus of control and financial behavior. The study revealed that financial literacy changes the relationship between internal locus of control and financial behavior. Nonetheless, the study did not account for the financial planning of the target population. Moreover, the study was done with focus on formal sector workers.

Bongomin, Ntayi, Munene, and Malinga (2017) conducted a study on the relationship between access to finance and growth of SMEs in developing economies, analyzing financial literacy as a moderator. The study revealed that financial literacy positively moderates the relationship between access to finance and growth of SMEs in developing economies.

The moderating effect of financial literacy and income on the relationship between harmonious corporate social responsibility (CSR) and financial inclusion was studied by Singh and Misra (2020). By the outcome of the study, a moderating effect of financial literacy was reflected in CSR-financial inclusion linkages.

The moderation effect of financial literacy on the relationship between financial planning and financial well-being has not been considered in past research. This leaves room for future research to be conducted on the moderating effect of financial literacy on the relationship between financial planning and financial well-being of both formal and informal sector workers.

### **Informal Sector**

The informal sector is seen as unregulated economic activities (Hart, 1973) or economic activities that contribute to the officially calculated Gross National Product (GNP) but not registered (Feige, 1990). The sector is sometimes referred to as the market-based production of goods and services, whether legal or illegal, that is not included in the official estimate of the Gross Domestic Product [GDP] (Smith, 1994).

Over the years, researchers seem to be looking at the financial issues of the informal sector workers but there still seem to be more areas to touch on in relation to the financial issues facing the informal sector workers. Looking at the impact of financial literacy on financial planning of informal sector workers, Githui and Ngare (2014) showed that there is a positive relationship between financial literacy and retirement planning. The study further revealed that low level of financial literacy seemed to call for low level of retirement planning of workers in the informal sector. The study further revealed that marital status, level of income and education and age are correlated with retirement planning. Nevertheless, this study was done in Kenya and the specific activities of informal sector workers assessed were not stated, making it unclear how general the findings of the study is for all activities under the informal sector.

Among the studies performed on the informal sector workers in Ghana, very few are the studies that considered financial literacy, financial planning and financial well-being of the informal sector workers.

Studies on the informal sector workers in relation to financial literacy, financial planning, and financial well-being are that of Hart (1973), Bluwey (2012), Enu-Kwesi, Koomson, and Baah-Mintah (2013), Collins-Sowah, Kuwornu, and Tsegai (2013), Abane and Sakyi-Darko (2016), Arthur (2017), Amenuku (2018), Adu-Asare (2018), and Ofori (2021).

Among the studies that considered variables like financial literacy and financial planning of the informal sector workers, Amenuku (2018) looked at financial literacy, microfinance and performance of artisanal fishermen; Adu-Asare (2018) looked at Cocoa farming business, financial literacy and social welfare of farmers in Brong-Ahafo Region of Ghana, and Ofori (2021) looked at financial planning for retirement of self-employed workers in the Ghanaian.

Ofori (2021) revealed that educational level positively influences retirement planning of the self-employed workers in Ghana, however, the paper did not account for the relationship between financial literacy and retirement planning and did not also spell out the type of self-employed workers the study considered (whether they were belonged to urban activity or rural activity of the informal sector).

Adu-Asare (2018) and Amenuku (2018) found a positive relationship between financial literacy and financial well-being but Adu-Asare (2018) focused only on the cocoa farmers in Ghana and with that, looked at only one region whereas Amenuku (2018) focused only on fishermen in Elmina. The

financial literacy and financial well-being of other workers in the informal sector was not accounted.

Apart from Amenuku (2018), Adu-Asare (2018), and Ofori (2021) who studied on the informal sector, considering variables like financial literacy and financial planning, the remaining studies about the informal sector workers in the area of finance (Bluwey, 2012; Enu-Kwesi, Koomson, & Baah-Mintah, 2013; Abane & Sakyi-Darko, 2016; Arthur, 2017) focused more on poverty of the informal sector workers, not neglecting a study by Danquah and Osei-Assibey (2018) on informal sector, who focused on the area of tax.

Arthur (2017), in a study about poverty alleviation strategies employed by fisher Folks in Elmina, informed that even though fishers seem to use possible means to obtain a good standard of living, some still find themselves in poverty. This finding seems to be in line with the findings of Bluwey (2012), Enu-Kwesi, Koomson, and Baah-Mintah (2013) and Abane and Sakyi-Darko (2016) who looked at poverty among fisher-folk and crop-based farmer households in the Komenda Edina Eguafo Abrem district in the central region Ghana, the contribution of the Kakum Rural Bank to poverty reduction in the Komenda-Edina-Eguafo-Abrem Municipality in the central region, Ghana, and Community Perception of Decentralization and Poverty Reduction.

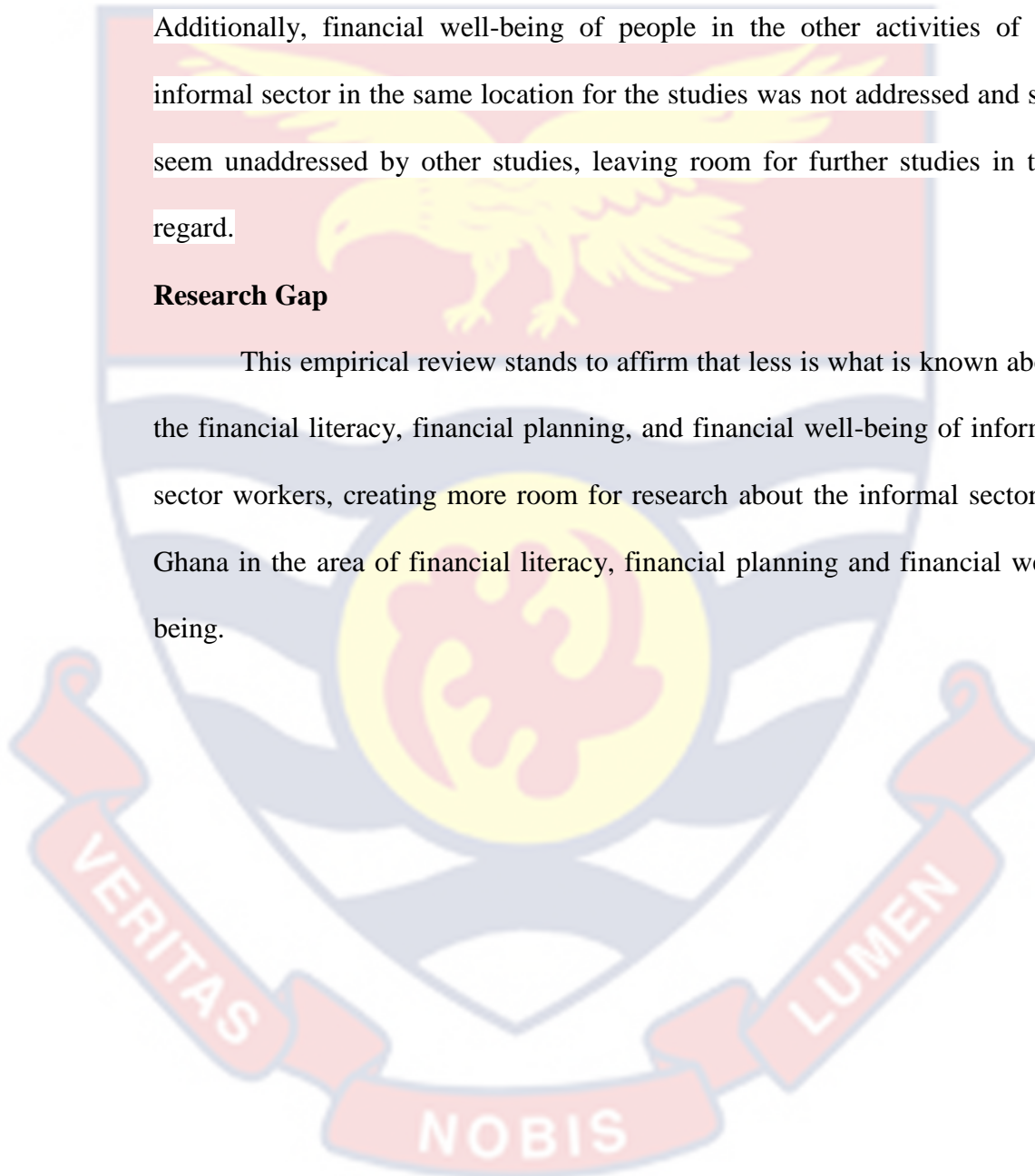
Arthur (2017) also found that fisher folks have improper financial records and that seems to result in them faced with challenges in alleviating themselves from poverty but the study by Arthur (2017), Bluwey (2012), Enu-Kwesi, Koomson, and Baah-Mintah (2013) and Abane and Sakyi-Darko (2016) all failed to look at the factors that influence the fisher folks to plan financially. Moreover, none of these studies seem to have looked at the

financial literacy level of the fishers and how that affects the poverty of the fishers explained by their studies. The study was only limited to fishers and only people in the municipality of K.E.E.A, neglecting the fishers of other towns and the poverty state of other activities of the informal sector.

Additionally, financial well-being of people in the other activities of the informal sector in the same location for the studies was not addressed and still seem unaddressed by other studies, leaving room for further studies in that regard.

### **Research Gap**

This empirical review stands to affirm that less is what is known about the financial literacy, financial planning, and financial well-being of informal sector workers, creating more room for research about the informal sector in Ghana in the area of financial literacy, financial planning and financial well-being.





## CONCEPTUAL FRAMEWORK

### Financial Literacy

- Financial Knowledge
- Financial Skills
- Financial Attitude
- Financial Behaviour

### Financial Planning

- Financial Budgeting
- Savings
- Investment plan
- Retirement plan

### Financial Well-being

- Ability to meet current basic needs
- Safe and sound mind about the future

H<sub>2</sub>

H<sub>5</sub>

H<sub>3</sub>

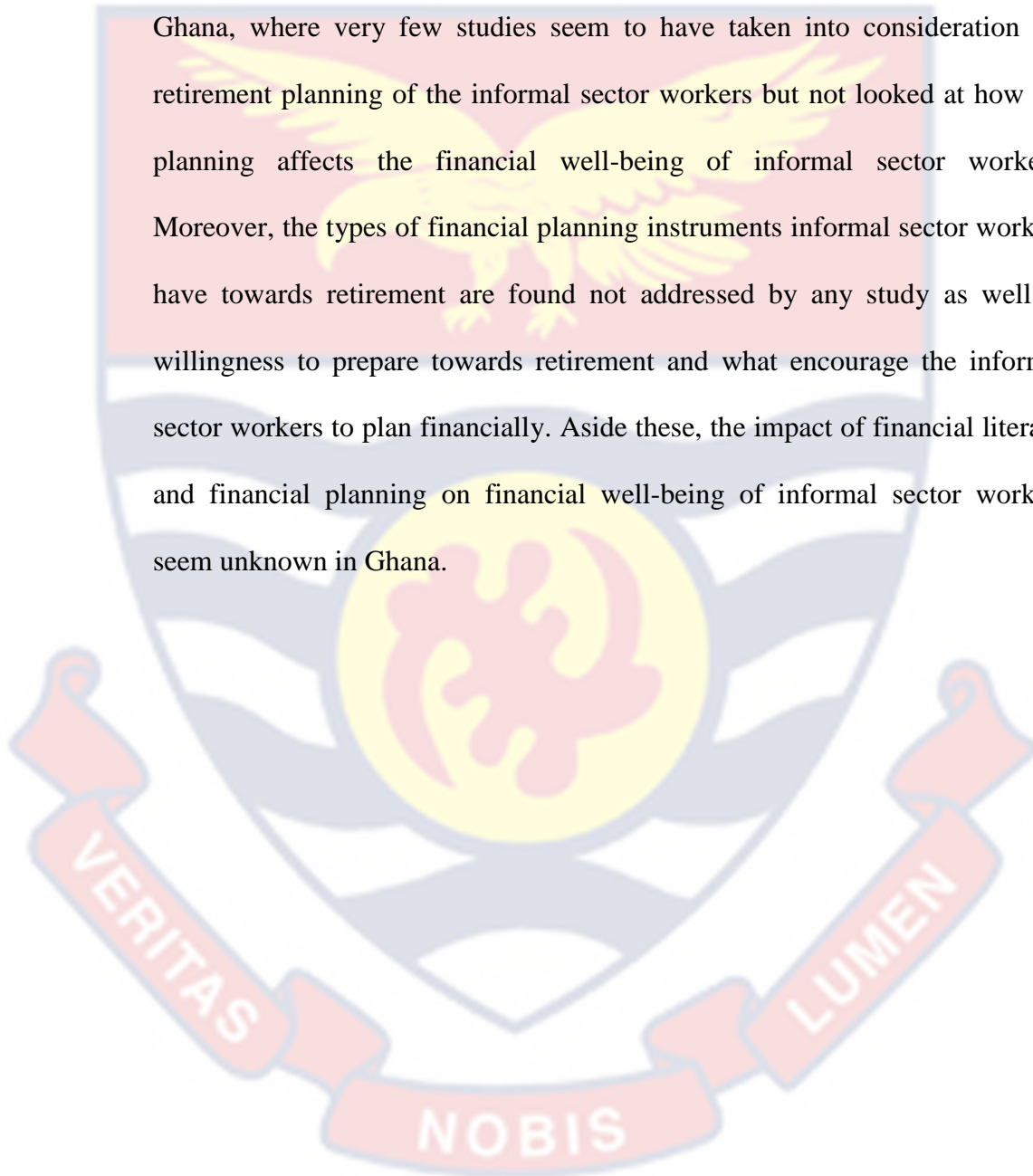
*Figure 1: Conceptual Framework*  
Source: Author's construct (2022)

The conceptual framework reveals suggests that financial literacy influences financial planning; financial literacy influences financial well-being; and financial planning influences financial well-being. The framework also suggests that financial planning mediates the relationship financial literacy and financial well-being. In addition, the framework suggests that financial literacy moderates the nexus between financial planning and financial well-being.

### Chapter Summary

This chapter was ordered as follows: theoretical review [taking in account, theories underlying financial planning and financial well-being], empirical review and conceptual framework. Having looked at several studies

in line with this study that seem essential to understand financial literacy, financial planning and financial well-being of informal sector workers, it was found that there exist some gaps in literature concerning the financial literacy, financial planning and financial well-being of informal sector workers in Ghana, where very few studies seem to have taken into consideration the retirement planning of the informal sector workers but not looked at how the planning affects the financial well-being of informal sector workers. Moreover, the types of financial planning instruments informal sector workers have towards retirement are found not addressed by any study as well as willingness to prepare towards retirement and what encourage the informal sector workers to plan financially. Aside these, the impact of financial literacy and financial planning on financial well-being of informal sector workers seem unknown in Ghana.



## CHAPTER THREE

### RESEARCH METHODS

#### Introduction

The study mainly sought to look at how financial planning and financial literacy influence the financial well-being of informal sector workers. This chapter gives the overview of methods used for the study and it is organized in order of research paradigm, research approach, research design, study area, population, sampling procedure, data collection instruments, data collection procedure, data processing and analysis, and chapter summary.

#### Research Paradigm

There are many paradigms for conducting research, however, the positivist and constructivist paradigms are the two primary classical paradigms (Saunders, Lewis & Thornhill, 2009). In business research, the opinions of these two conventional techniques regarding the manner in which a study is conducted are quite important. Bryman (2009) defined the positivist paradigm as objective epistemological stances that extend the methodologies of the scientific sciences to include the investigation of social reality.

This method's proponents contended that knowledge is formed deductively from a theoretical or hypothetical perspective; as a result, theories are evaluated hypothetically with the intention of either rejecting or not rejecting them. According to this method, phenomena are exposed to logically constructed theories by having the theories' applicability being empirically tested by utilizing inductive and deductive hypotheses (Wahyuni, 2012). As a result, the positivist approach is used in this study since the research's

constructs can be accurately specified, quantified, analyzed, and evaluated utilizing theoretical models.

### **Research Approach**

There are three research approaches, namely; qualitative, quantitative and mixed method (Saunders, Lewis, & Thornhill, 2007). Out of these approaches, the study adopted the quantitative approach. Quantitative research aims to explain a phenomenon using numerical data that can be quantitatively examined (Babbie, 2015; Muijs, 2010). Saunders, Lewis, and Thornhill (2007) posited that a quantitative model is applied to get data in a form that is numeric such as to test a general theory. Moreover, using a quantitative strategy yields outcomes that can be converted to statistics, allowing statistical comparison between different entities, and producing results that are exact, conclusive, and standardized (Sukamolson, 2005).

Using the quantitative approach of research, a questionnaire was used as a survey method to collect data from the informal sector workers in the Central Region of Ghana. The questionnaire explicitly stated its goal and included a request for participants to participate freely.

### **Research Design**

This study employed the descriptive research design, particularly, survey research method. Survey research is the process of gathering data by administering a structured questionnaire to a sample of people chosen to be representative of a given population. The questions are pre-formulated and are asked in a predetermined order (Saunders et al, 2007). A survey's sampling, questionnaire design, administration, and data analysis are all tasks that a researcher must complete (Saunders et al, 2007). Through interviews, these

questionnaires are given to an individual or group of individuals. It must be decided in advance whether these interviews will take place in person, on the phone, or through another form of communication. The typical purpose of a survey is to describe or learn from a current activity by observing changes in the behavior of the individuals that interest the researcher. Surveys therefore tend to be descriptive in character.

### Study Area

The study area is Cape Coast and Elmina in the Cape Coast Metropolis and Komenda, Edina, Eguafo, Abrem Municipality in the Central Region of Ghana, respectively. Overall, the population of central region is informed to be 2,859,821 with males being 1,390,987 and females being 1,468,834, revealing that the females are more than the males in the Region (GSS, 2021). Figure 2 depicts the boundaries of the Cape Coast metropolis, which are the Twifu-Hemang-Lower Denkyira district to the north; Gulf of Guinea to the south; Abura-Asebu-Kwamankese district to the east; and the K.E.E.A Municipality to the west.



*Figure 2:* Map of Central Region, Ghana

Source: Geographic Information System (GIS) and Cartographic Unit of the Department of Geography and Regional Planning, University of Cape Coast (UCC), Cape Coast.

The total population of the Cape Coast metropolis is 189,925 (female= 97,135; male= 92,790). The land covers 124 kilometre square. On the other hand, the total population of the K.E.E.A municipality is 166,017 (female= 85,447; male= 80,570) and its land covers 468 kilometre square. The phenomenon in Cape Coast metropolis and K.E.E.A municipality may be explained first by a higher male out-migration rate and second by the metropolis's rapid urbanization, which encourages economically active females to stay back and engage in small-scale economic activities. Although the higher female population reflects the national pattern, the phenomenon may be caused by both factors. With people under the age of 15 making up 42.2% of the total population, the age distribution shows that the city is mostly known for its young population. In all age groups, with the exception of 0-14, females are slightly more prevalent than males. A minority of people are in the age group (65 and older) (GSS, 2021).

Like most other regions in Ghana, the study area's residents face a significant developmental challenge related to issues like unemployment and low income levels. The absence of diversified work options in these towns, which forces many people into informal sector jobs like small-scale manufacturing, petty commerce, agriculture, and fishing is generally the cause of the low income level scenario that is present there (GSS, 2021).

As it is informed that a researcher should be trusted by the population under study and have a personal relationship built (in other words, have a rapport built), be comfortable with the people in the field and, as well, know the activities of the study population, their interests, cultural dynamics (local customs and norms), and among others (Schensul, Schensul, & LeCompte,

1999), the Cape Coast and Elmina towns were chosen as the study area for this research. Moreover, the two towns were chosen on the basis of them being the capital towns of the Cape Coast metropolis and the K.E.E.A municipality, respectively. These two towns are part of Ghana's major cosmopolitan and heterogeneous regions, illustrating diverse religious, cultural, and demographic characteristics (GSS, 2021).

In addition, the two towns are populated by all varieties of informal sector activities. GSS (2019) posited that there are over 300 number of fishing towns/communities in Ghana among which Elmina is noted to be the third (3rd) largest fish landing site (oriented more on artisanal fishery) after Tema and Sekondi fishing harbours. It is further informed that contribution of only Elmina to the GDP of Ghana in view of fishing exercises is about 15% of total fish output of the country (The Elmina 2015 Strategy).

The two towns have individuals from all varieties of informal sector workers, ranging from fishing and fishing processing, agro-based processing, farming, food traders and processors, refuse collectors, drugstore operators, night soil carriers, funeral undertakers, traditional/herbal healers, attendants in private maternity homes, traditional birth attendants, repairers of watches, auto mechanics, sprayers, vulcanizers, refrigeration equipment, radios, welders, mechanical or electrical/electronic equipment, auto electricians, graphic designers, musicians, audio-visual workers - photographers, private security men, cinema/video operators, hairdressers, performers, film-makers, barbers, masons, food processing, textile and garments, steel benders, small-scale plumbers, house-wiring electricians, carpenters, wood processing and metal works.

## Population

According to Saunders et al. (2007), a set of groups out of which some sample is taken is what defines population. Population for the study is informal sector workers in Cape Coast and Elmina in the Central Region. Despite being substantial, it is impossible to estimate the population of those employed in the informal sector in Cape Coast and Elmina, therefore this information was unavailable when the study was conducted. As a result, the study's population size complied with description of a "unknown" but sizable population according to Smith (2013).

The rural activities of the informal sector actually comprise fishing and fishing processing, agro-based processing, and farming. The urban activities of the informal sector comprise construction, services, and manufacturing activities. The services activities under the urban informal sector are that of food traders and processors, chemical sellers, night soil carriers, drugstore operators, refuse collectors, funeral undertakers, traditional/herbal healers, attendants in private maternity homes, refrigeration equipment, traditional birth attendants, repairers of watches, radios, mechanical or electrical/electronic equipment, auto mechanics, sprayers, welders, vulcanizers, auto electricians, musicians, graphic designers, photographers, cinema/video operators, performers, film-makers, audio-visual workers, hairdressers and barbers/private security men.

The construction activities, categorized under the urban activity of the informal sector, consist of textile and garments, masons, house-wiring electricians, steel benders, carpenters, and small-scale plumbers, whereas the



manufacturing activities consist of food processing, wood processing and metal works.

These activities under the informal sector seem to be organized by trade unions (Nyameky et al., 2009). These include Ghana Private Road Transport Union (GPRTU), Ghana Federation of Labour (GFL), General Agricultural Workers Union (GAWU), Communication Workers' Union (CWU), Timber and Wood Workers' Union (TWU), Local Government Workers' Union (LGWU), Maritime and Dockworkers' Union (MDU), Public Service Workers' Union (PSWU), Industrial and Commercial Workers' Union (ICU), and among others.

The Ghana Private Road Transport Union (GPRTU) is made up of Transport owners, Transport drivers, and Transport station attendants. General Agricultural Workers Union (GAWU) is made up of Self-employed rural workers, Tenant farmers, Inland canoe fishermen, Rice farmers, Cassava farmers, Cotton farmers, Women's group, Tree farmers, Oil palm farmers, Irrigation farmers, and Tractor operators. As for the Timber and Wood Workers' Union (TWU), it is made up of National Sawyers Association, Small-Scale Carpenters Association, Cane and Rattan Workers' Association, Chainsaw Operators, Small scale Carpenters, Wood Working Machine Owners' Association, Wood carvers, Rattan and cane weavers, Charcoal burners, and Sawn timber sellers at timber market (Nyameky et al., 2009).

The Communication Workers' Union (CWU) is made up of Ghana Electronics Servicing Technicians' Association and Postal Agents Association whereas Local Government Workers' Union (LGWU) is made up of Petty traders (in containers), Craftsmen, Refuse and waste collectors, Butchers'

Association, and Charcoal sellers. The Public Service Workers' Union (PSWU) is made up of National Lotto Receivers' Association, and Ghana Union of Professional Photographers with Casual workers in the shipping industry are organized into a labour pool called Ghana Dock Labour Company falling under Maritime and Dockworkers' Union (MDU). Regarding Ghana Hairdressers' and Beauticians Association, and the defunct domestic workers association, they are said to fall under the Industrial and Commercial Workers' Union (ICU) but Tie and Dye and Batik makers and Farmers fall under Ghana Federation of Labour (GFL) (Nyameky et al., 2009).

### **Sampling Procedure**

Since it is impossible to reach all the population, it is often prudent to resort to samples. Aside the inability to reach all population, working with samples generates accurate results, in that, the researcher has more time at his disposition to ask questions that he would have been unable to ask should he have been working with the entire population. Working with samples also reduces cost and is less time consuming (Saunders et al, 2007).

There are basically two main sampling procedures, notably, probability and non-probability sampling (Omair, 2014; Singh & Masuku, 2014; Taherdoost, 2016; Etikan & Bala, 2017). This study employed the probability sampling procedure. The probability sampling is a method where every element (member) of the population has an equal chance or opportunity for selection as a subject. Advantage of probability sampling is that it increases the sample's representativeness of the population and decreases sampling error and sampling bias (Omair, 2014; Singh & Masuku, 2014; Taherdoost, 2016; Etikan & Bala, 2017).

Using the probability sampling procedure, the study adopted the simple random technique out of the five probability sampling techniques, namely; simple random, stratified random, cluster sampling, systematic sampling, and multi stage sampling (Taherdoost, 2016). The simple random technique was considered appropriate for the study due to time and financial constraint. Moreover, the study sought to give everyone in all activities of the informal sector same chance of being selected for the research (Taherdoost, 2016; Etikan & Bala, 2017), hence, resorted to simple random technique. A further advantage of simple random technique is that it provides an unbiased and better estimate of the parameters (Acharya, Prakash, Saxena, & Nigam, 2013).

In view of determining sample size for this study, the study used the sample size determination table by Adam (2020). The sample size determination table of Adam (2020) removes the restriction of the use of Yamane formula for computing sample size of a population. According to sample size determination chart by Adam (2020), minimum sample size of 385 was chosen to satisfy the requirement of 385 minimum samples for a big population greater than 1,000,000 and also for population which is not known.

The formula developed by Cochran (1977) was used to establish the minimal sample size, and it was recently emphasized in a study by Adam (2020) as:

$$n = \frac{Z_{\alpha/2}^2 * P * Q}{e^2},$$

where n denotes sample size, e denotes the maximum allowable error from estimation, set at 5% (i.e., 0.05), as informed by Krejcie and Morgan (1970) and Adam (2020) when categorical data is given; according to the advice of Krejcie and Morgan (1970), the population proportion (p), which represents

the mathematical chance of success, is set at 5% (i.e., 0.50), in order to ensure that the variance is maximized and a maximum sample size is produced;  $q$  on the other hand, represents the statistical chance of failure and is equal to  $(1-p)$ ; and the mathematical parameter,  $Z$ , written as  $(1-e)$ , is dependent on the degree of confidence, which is defined as 95% (i.e., 0.95), and when taken from the  $Z$ -value table, produces a result equivalent to 1.96 (Z-table.com, n.d.).

Overall, a size of 150-200 as a sample could be regarded acceptable and believed to reflect some population (Struwig & Stead, 2001). Hair and Anderson (1998) also posits that a sample size of 100 and above is considerate to mimic a general population. This throws weight on the sample size of 408 for the study to being appropriate.

### **Data Collection Instruments**

To find answers to the questions concerning financial planning and financial literacy and their influence on financial well-being of informal sector workers, the researcher used questionnaire as the instrument to gather data for the study. Bell (1998) proposed that if questionnaires are properly conducted, they can be a great way to get objective data on people's attitudes, beliefs, experiences, and past behaviour.

The questionnaire was developed by the researcher with the help of the supervisor. The item format was determined according to the format of Lusardi (2008) and Lusardi and Mitchell (2011). The questionnaire was structured in sections; A, B, C and D. Section A covered questions on demographic data, section B on financial literacy, section C on financial planning, and section D on financial well-being (in terms of latent variables).

This method seemed appropriate since it encouraged prompt responses from the respondents.

### **Instrument Validity**

The most crucial component of instrument development is validity, which refers to the extent to which the instrument measures what it promises to measure (Remler & Van Ryzin, 2011; Robson, 2011). Peer reviews and numerical metrics are used to assess validity (Baumgarten, 2012). Connel, Carlton, and Brazier (2018) posit that content validity assesses how well the questionnaire's set of items addresses all the distinct concerns that the study is trying to gauge whereas convergent validity, a subset of content validity, refers to the degree of real relationship between two ostensibly related constructs. Convergent validity is the level of agreement or convergence among multiple items when measuring the same constructs.

According to Bagozzi, Yi, and Phillips (1991), it is logical to assume that for two or more indicators of the same construct to serve as reliable measurement indicators for the construct, there should be a high degree of covariance between them. Bagozzi et al. (1991) also posit that discriminant validity is the degree to which measurements of several constructs are distinct from one another. Constructs should therefore differ because they measure various ideas. When there is low association between two or more constructs, they are considered separate.

To ensure the validity of the research instrument, the researcher, with the help of research supervisor, ensured that the data collection instrument could collect the information it is intended to collect. The study supervisor's close examination of the questionnaire and peer reviews helped to ensure face

validity of this study. Moreover, after designing the questionnaire, the researcher's supervisor pre-tested it to ensure its internal validity. Subsequently, the pre-test results were examined and necessary corrections were made before the actual survey. In this study, validity was also evaluated using the Average Variance Extracted (AVR). Each of the adjustment dimensions was to have an AVR of at least 0.500.

Respondents were also interviewed by the researcher to validate the answers given in the questionnaire. Moreover, after designing the questionnaire, the researcher's supervisor pre-tested it to ensure its internal validity. Subsequently, the pre-test results were examined and necessary corrections were made before the actual survey. Furthermore, if a different sample is employed in the second phase, the findings are no longer valid. The sample size is the final obstacle to proving validity. There may be a validity issue if it is insufficient in either phase. As the sample size for this investigation is deemed sufficient, the same sample was employed throughout the investigation, which makes the validity unaffected.

### **Instrument Reliability**

The degree of consistency of a test or method of a study and its findings and representativeness of a population are referred to as reliability. In simple terms, reliability refers to the consistency of measurement. Reliability is such that if the study is repeated by other researchers, for a comparable population, using the same methods in other contexts, the findings should be repeatable (Zohrabi, 2013). Researcher awareness, suspicions, and inquiries all play a role in determining reliability in the field. From various perspectives

(legal, economic, political, and personal), he or she considers individuals and events.

In designing the instrument for the study, the researcher considered that the instrument must be reliable enough to collect the same information even when different researchers use it at different times, that is to say, to ensure instrument triangulation. In order to obtain reliable data, the researcher designed the questionnaire through a series of revisions under the guidance of the supervisor and institutional review board to ensure high quality data collection. Regarding dependability, the researcher seeks to handle the quantitative data using the reliability techniques recommended by Bryman and Bell (2015). Cronbach Alpha would be used in these procedures to measure reliability, among other statistical techniques.

#### **Data Collection Procedures**

Data collection began on 17<sup>th</sup> August and ended on 30<sup>th</sup> August, 2022, with focus on weekdays and hours between 8:00am to 4:00pm, by all participating members (field assistants) of this study. Reaching respondents during the time frame seemed a bit tedious and daunting.

Before the data collection, the researcher requested an introductory letter from the Department of Finance and permission from University of Cape Coast Institutional Review Board (UCCIRB). The introductory and permission letter from the Department of Finance and UCCIRB assisted the researcher to gain permission from the respondents to carry on with the administering of questionnaires to them. The study looked at all activities of the informal sector but it was unfortunate that some of the activities in the informal sector do not have associations, not to talk of meeting days, nevertheless with the activities

in the informal sector that have associations such as the Ghana Private Road Transport Union (GPRTU), Timber and Wood Workers' Union (TWU), General Agricultural Workers Union (GAWU), Communication Workers' Union (CWU), Public Service Workers' Union (PSWU), Local Government Workers' Union (LGWU), Maritime and Dockworkers' Union (MDU), Ghana Federation of Labour (GFL), Industrial and Commercial Workers' Union (ICU), and among others, the researcher was able to get more attention from them as they were easy to access as compared to those who do not associations and association meeting days.

With informal sector workers like seamstresses and hair dressers who seem to have associations and some meeting days, the researcher arranged a meeting with the leaders of the associations to elaborate the purpose of the research and the questionnaire to them but the category of informal sector workers who do not have associations, elaboration on the purpose of the study and the questionnaire was done as and when they were approached to help answering the questionnaire. To ensure that respondents gave valid responses to the questionnaire, the researcher and field assistants took time to explain to respondents the purpose of the study and assured them confidentiality to inspire them to respond to the items without any suspicion, strictly following the UCCIRB rules and guidelines. Apparently, it took close to 7 minutes for each participant to complete the questionnaire.

### **Data Processing/Management**

Following the data collection, the data obtained from questionnaires was numbered serially, edited, coded and further analysed for identification, after which the responses to various questions given by the respondents were



assigned with values or codes in excel sheet and stored. Further, the data was grouped on the basis of their connection with the various research objectives and finally, statistical analyses by structural equation model (SEM) was performed using Smart PLS software, not leaving out assessing the measurement model. The data is kept and accessed solely by the researcher till the thesis is completed, submitted and articles published before it is disposed lest corrections that may be suggested upon submission of the thesis and manuscript for publication may require something to be done with the data.

### **Data Processing and Analysis**

Analysis of data in a particular approach is a critical part of any quantitative study and that is where a researcher can even draw inferences from the outcome the analysis would bring to buttress the study objectives thus, after collection of data, a researcher is to examine the data to support each theory used in a study.

Statistical analyses by Partial Least Squares-Structural Equation Model (PLS-SEM) were performed using Smart PLS software not leaving out, assessing the measurement model. SEM comprises of two major factors, being, structure models and measurement models. The structural models are known to exhibit the relationship that exists between constructs of the study whilst measurement models are employed for validation of construct and refinement of scale. PLS-SEM captures the measurement error in variables observed and they allow including variables that are unobserved but measured by indicator variables indirectly (Hair, Ringle & Sarstedt, 2014; Chin, 1998).

The study employed formative models following Ringle, Sarstedt, and Schlittgen (2020). The theoretical foundation for using formative models in

PLS-SEM can be attributed to the concept of formative indicators. Formative indicators are indicators that are presumed to form or define the construct, rather than simply reflecting its underlying dimension. According to this perspective, the construct is seen as an effect or outcome of its constituent indicators.

In view of validation of construct and refinement of scale by the use of SEM, Hair et al. (2014) suggested that indicators of measurement model loaded beyond 7.0 on latent variables are considerably suitable. It is further informed by Hair et al. (2014) that a score of .6 to .7 of Composite Reliability (CR) and .5 of Average variance extracted (AVE) are regarded best for measurement model.

### Model Specification

Financial well-being can be said to be a function of financial literacy and financial planning. This can be put in a model as:

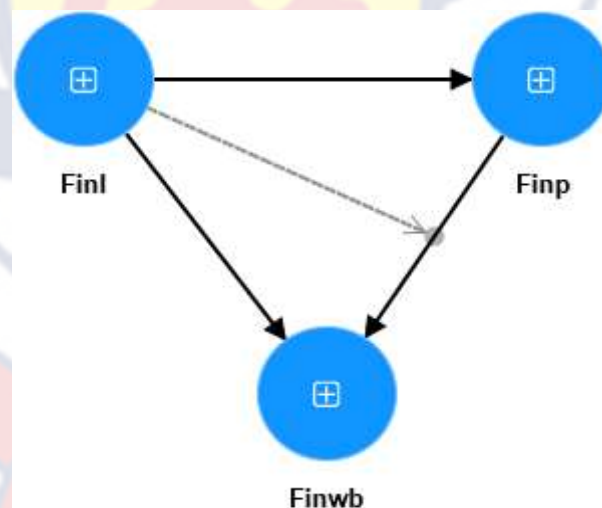


Figure 3: Model Specification

Source: SMART PLS

### Ethical Consideration

As part of ethical consideration procedure, the researcher submitted the study proposal with its questionnaire to the Institutional Review of Board

(IRB) of the University of Cape Coast (UCC) on the 10<sup>th</sup> of March, 2022 to apply for Ethical Clearance before collection of data. The clearance letter was issued to the researcher on the 16<sup>th</sup> of August, 2022 upon meeting all the requirements for approval of Ethical Clearance.

In collecting the data, all participants who took part in the survey procedure for this study were well-prepared with all pertinent information regarding the study. Voluntary involvement, the right to privacy, anonymity and security of information were critically observed. With regards to voluntary participation, every respondent was, on his/her own free will, allowed to participate in data collection exercise. The issue of anonymity was resolved by preventing respondents from supplying the questionnaire with specific details about themselves in relation to names, contact numbers and personal addresses.

Respondents were also guaranteed that none of their identities would be leaked to or used for any reason other than this analysis in public domain. All the information supplied by the responders is treated with the utmost secrecy. To avoid plagiarism, information from other studies that are utilized in the study is properly acknowledged.

### **Chapter Summary**

This chapter looked at research design, population, sampling procedure, data collection instruments, data collection procedures, and data processing and analysis, highlighting the statistical analyses the study employed. Kindly take note that the observed limitations of the study were that the study was limited to only Central Region of Ghana but more regions in the country could have been employed in the study.

## CHAPTER FOUR

### RESULTS AND DISCUSSION

The purpose of this study was to analyse the financial literacy and financial planning of the informal sector workers and how that influences the financial well-being of the informal sector workers. This chapter presents the results and discussion of the study. The chapter covers the analysis and findings of the research, using both descriptive and inferential statistics. Specifically, the characteristics of the respondents are discussed. This is followed by types of financial planning instruments employed by the informal sector workers; and factors that encourage informal sector workers to plan financially. The chapter further discussed the findings of the relationship between the predictor variables and response variable.

#### **Demographics of Respondents**

A total number of 408 individuals were served the questionnaire. Out of the 408 respondents, 219 representing 53.68% were females and 189 representing 46.32% were males. Out of the 408 persons surveyed, 150 (36.76%) were aged between 21 and 30 years, 90 (22.06%) were aged between 31 and 40 years, 84 (20.59%) were aged between 41 and 50, and 45 (11.03%) were aged 51 years and above. The informal sector workers aged up to 20 years were the least (39, i.e. 9.56%) out of the 408 respondents.

This implies that females constitute most of the informal sector workers in Cape Coast and Elmina. The majority age was between 21 to 30 years of age and above. This suggests that the youthful population of Ghana's economy who are not employed in the formal sector are found engaging in the informal sector. Most of the respondents ( $n = 153$ ; 37.5%) were found to have

education up to Junior Secondary School (JSS) level. However, a few respondents (n = 30; 7.35%) indicated that they ended their education at the primary school level whereas those who had never been to school were 54 (13.24%). Quite an appreciable proportion (n = 99; 24.26%) and (n = 72; 17.65%) were found to have schooled up to the Senior Secondary School (SSS) level and tertiary level, respectively.

In relation to the two main activities under the informal sector, those under the urban activity comprised 273 (66.91%) and those under the rural activity were 135 (33.09%). Under the rural activity, individuals who were found to be in the fishing and fishing processing were 75 (18.38%); individuals in the agro-based processing were 21 (5.15%); and those in the farming activity were 39 (9.56%). Out of the 408 respondents, 213 (52.21%) were revealed to belong to the services activity under the urban activity of the informal sector; 72 (17.65%) belonged to the manufacturing activity; and 71 (17.40%) belonged to the construction activity.

**Table 1: Descriptive Statistics of the Sample**

Variable	N	%
<b>Gender</b>		
Male	189	46.32
Female	219	53.68
<b>Age</b>		
up to 20	39	9.56
21-30	150	36.76
31-40	90	22.06
41-50	84	20.59
51 and above	45	11.03
<b>Level of Education</b>		
Never been to School	54	13.24
Primary	30	7.35
JSS	153	37.5
SSS	99	24.26
Tertiary	72	17.65

<b>Activity of Informal Sector</b>		
Urban	273	66.91
Rural	135	33.09
<b>Category of Rural Activity</b>		
Fishing and fishing processing	75	18.38
Agro-based processing	21	5.15
Farming	39	9.56
<b>Category of Rural Activity</b>		
Services Activities	213	52.21
Manufacturing Activities	71	17.4
Construction Activities	72	17.65
<b>Classification of Construction Activity</b>		
Masons	33	8.09
Carpenters	30	7.35
Steel benders	12	2.94
Small-scale plumbers	9	2.21
House-wiring electricians	12	2.94
<b>Classification of Manufacturing Activity</b>		
Food processing	72	17.65
Textile and garments	21	5.15
Wood processing and metal works	39	9.56
<b>Classification of Services Activity</b>		
Food traders and processors	50	12.25
Seamstress and Tailors	39	9.59
Drivers	12	2.94
Chemical Sellers/Drugstore Operators	10	2.45
Funeral undertakers	2	0.49
Night soil carriers	3	0.74
Refuse collectors	6	1.47
Traditional/herbal healers	4	0.98
Attendants in private maternity homes	3	0.74
Repairers of watches	6	1.47
Radios, mechanical or electrical/electronic equipment	3	0.74
Auto mechanics	8	1.96
Sprayers	9	2.21
Welders	9	2.21
Technician	11	2.7
Auto electricians	12	2.94
Graphic designers	4	0.98
Cinema/video operators,	7	1.71
Performers, musicians and film-makers,	9	2.21
Hairdressers and barbers	34	8.33
Private security men	6	1.47
<i>Notes: N = 408</i>		

Source: Field Survey (2022)

From Table 1, it can be observed that under the construction activity, 33 (8.09%) comprised masons; 30 (7.35%) comprised carpenters; 12 (2.94%) comprised steel benders; 9 (2.21%) comprised small-scale plumbers; and 12 (2.94%) comprised house-wiring electricians.

With respect to the classifications of work of the manufacturing activity, 72 (17.65%) out of the 408 respondents were engaged in food processing; 21 (5.15%) in textile and garments; and 39 (9.56%) were engaged in metal works and wood processing.

In relation to the services activity, food traders and processors were found to be dominant (comprising, 50, 12.25%), followed by seamstresses and tailors (comprising, 39, 9.59%), and hairdressers and barbers (comprising, 15, 3.68%). Aside that, 12 (2.94%) were drivers (belonging to the GPRTU). The frequency and percentage of other works under the services activity can also be found in Table 1.

### **Types of financial instruments informal sector workers have towards their future**

The study sought to find out the types of financial instruments informal sector workers use to prepare for their future. It was revealed that most (n = 300) of the respondents resorted to savings as their type of financial instrument, representing 73.53%. This was followed by Susu, money box, fixed deposit and treasury bill which comprised 201 (49.26%), 165 (40.44%), 132 (32.35%), and 78 (19.12%), respectively as shown in Table 2.

**Table 2: Type of financial instruments applied**

Item	N	%
Money box	165	40.44
Susu	201	49.26
Savings	300	73.53
Fixed deposit	132	32.35
Treasury bill	78	19.12

*Notes:* N=408

Source: Field Survey (2022)

The study sought to find out how informal sector workers obtain financial knowledge. Respondents were asked to give multiple responses as to how they acquired financial knowledge. As shown in Table 3, majority (n = 243; 59.56%) of the respondents obtain financial knowledge from friends, family and co-workers. However, 225 (55.15%) out of the 408 respondents also indicated they obtain financial knowledge from television. Those who obtain financial knowledge from radio and face-to-face communications with financial institutions were 222 (54.41%) and 201(49.26%), respectively. Evidently, the study found that acquiring financial knowledge by face-to-face communications with financial institutions was the least forms by which the informal sector workers obtain accurate financial knowledge.

**Table 3: Means of obtaining financial knowledge**

Item	n	%
Face-to-face communication with the financial institutions	201	49.26
Radio	222	54.41
Televisions	225	55.15
Friends, Family and Co-workers	243	59.56

*Notes:* N=408

Source: Field Survey (2022)



### Key factors that encourage informal sector workers to plan financially

The study looked out for the factors that encourage the individuals in the informal sector to plan financially. Respondents were asked to give multiple responses about the factors that encourage them to plan financially. It was revealed that school fees and utility are the most pressing reasons why most of the informal sector workers plan financially having recorded 258 (63.24%) out of the 408 responses as shown in Table 4. Reasons following school fees and utility bills as why the informal sector workers plan financially were unforeseen expenses/demands, rent and property goals which had 246 (60.26%), 237 (58.09%) and 135 (33.09), respectively, out of 408 responses.

**Table 4: Reason for financial planning**

Item	n	%
School Fees	258	63.24
Utility bills	258	63.24
Rent	237	58.09
Property goals	135	33.09
Unforeseen expenses/demands	246	60.29

Notes: N=408

Source: Field Survey (2022)

As revealed in Table 5, most of the informal sector workers (n = 258; 63.24%) had no financial plan to meet their retirement needs. This could be as a result of ignorance on optional pension plan.

**Table 5: Having financial plan to meet retirement need**

Item	n	%
Yes	150	36.76
No	258	63.24

Notes: N=408

Source: Field Survey (2022)

From Table 6, it was revealed that majority (n = 306; 75%) of the informal sector workers, out of the 408 respondents, had no knowledge on optional pension plan (tier 3) which is made available unto them according to the Ghana National Pensions Act, 2008 (Act 766).

**Table 6: Knowledge on optional pension plan (tier 3)**

Item	N	%
Yes	102	25
No	306	75

Notes: N=408

Source: Field Survey (2022)

From table 7, it was revealed that most (n = 207; 50.74%) of the informal sector workers wanted to participate in retirement as compared to those who do not see a need to participate in retirement planning. Those who do not want to participant in retirement planning have a view that only those in the formal sector are to participate in retirement planning.

**Table 7: Willingness to participate in retirement planning**

Item	n	%
Yes	207	50.74
No	201	49.26

Notes: N=408

Source: Field Survey (2022)

### Measurement model

The relationship between financial literacy and financial planning; number of dependents and financial well-being; and financial literacy and financial planning on financial well-being of informal sector workers in Cape

Coast and Elmina, were modelled using the partial least squares structural equation modelling (PLS-SEM) estimator.

The study used version 4 of Smart-PLS was the statistical software program that was utilized to process and analyse the data used in this investigation. The 5,000 bootstrap samples used to obtain the regression findings were used to test the hypotheses at a 5% level of significance. PLS-SEM performs a dual analysis by describing the measurement model and analysing the structural model (Ringle et al., 2015). The assessment of structural models includes the evaluation of path coefficients and the relevance of those coefficients. The following assessments were also offered.

#### **Indicator factor loadings**

Factor loadings, which range from -1.0 to 1.0, indicate how much a given factor is correlated with the items in a given correlation matrix. A greater value, expressed in absolute terms, indicates a higher correlation (Pett, Lackey, & Sullivan, 2003). The factor loadings for each indicator used in this investigation are shown in Table 8.

According to Hair, Black, Babin, and Anderson (2010) and Hair, Sarstedt, Matthews, and Ringle (2016), indicators show a satisfactory level of reliability when the items have loadings between 0.5 and 0.7. In view of that, dependability of the indicators employed in the study was then confirmed. The factor loadings were greater than 0.5 and had a minimum and a maximum of 0.751 and 0.948, respectively, and were significant at  $p < 0.005$ . FB2, FB4, and FB5 indicators of financial behaviour had factor loadings less than 0.5 and thus, were deleted.

### **Multicollinearity of indicators**

The variance inflation factor (VIF) statistic was used in the study to assess the indicators' collinearity, in line with Fornell and Bookstein (2018). At 5, the criterion for VIF is justified as being conservative but at 10, it is justified as being high (Alauddin & Nghiemb, 2010; Asthana, 2020; Gomez et al., 2016). However, according to Asthana (2020), multicollinearity is deemed to exist when the VIF exceeds the threshold value of 10. Given a threshold of 10, all indicators of this study do not appear to have multicollinearity, according to the indicator VIFs reported in Table 8.

### **Reliability of constructs**

If an indicator can be replicated in several contexts for the same results and is steady and consistent, it is considered reliable. Latent variable reliability is often established using the Cronbach Alpha (CA) and composite reliability (CR), both of which were used in this study. Table 8 shows the statistics that were generated for the two reliability measurements. The CR statistics were between 0.842 and 0.969, whereas the CA statistics ranged from 0.729 to 0.955. As a result, reliability statistics for both reliability measures were higher than the cut-off point of 0.70 proposed by Hair et al (2014).

**Table 8: Indicator factor loadings, variance inflation factor (VIF), reliability and validity statistics**

Construct	AB	FA	FB	FBG	FK	FS	H	IP	NUMD	RP	SSM	S	VIF	CR	AVE
<b>Ability to meet needs (AB)</b>													0.936	0.747	
AB1	0.774												2.07		
AB2	0.915												3.797		
AB3	0.911												3.672		
AB4	0.918												4.092		
AB5	0.792												2.272		
<b>Financial Attitude (FA)</b>													0.925	0.755	
FA1		0.835											2.28		
FA2		0.884											3.271		
FA3		0.904											3.74		
FA4		0.85											2.609		
<b>Financial Behavior (FB)</b>													0.797	0.57	
FB1			0.702										1.221		
FB3			0.698										1.217		
FB6			0.854										1.297		
<b>Financial Budgeting (FBG)</b>													0.816	0.593	
FBG1				0.568									1.308		
FBG2				0.776									1.915		
FBG3				0.797									2.279		
FBG4				0.805									2.482		
FBG5				0.21									1.553		
FBG6				0.191									1.399		
FBG7				0.569									1.474		
FBG8				0.729									1.633		

Construct	AB	FA	FB	FBG	FK	FS	H	IP	NUMD	RP	SSM	S	VIF	CR	AVE
<b>Financial Knowledge (FK)</b>													0.932	0.634	
FK1					0.735								2.082		
FK2					0.771								2.635		
FK4					0.822								3.842		
FK5					0.83								2.941		
FK6					0.829								2.959		
FK7					0.745								2.216		
FK8					0.812								2.909		
<b>Financial Skills (FS)</b>													0.931	0.729	
FS1						0.833							2.584		
FS2						0.862							2.749		
FS3						0.869							2.963		
FS4						0.855							2.535		
FS5						0.849							2.887		
<b>Happiness (H)</b>													0.923	0.799	
H1							0.885						2.93		
H2							0.931						3.67		
H3							0.864						1.935		
<b>Investment Planning (IP)</b>													0.892	0.673	
IP1								0.788					1.791		
IP2								0.825					2.351		
IP3								0.853					2.491		
IP4								0.815					1.928		

<b>Number of dependents (NUMD)</b>			0.961	0.83
NUMD1	0.881		3.127	
NUMD2	0.932		4.87	
NUMD3	0.953		7.405	
NUMD4	0.909		7.517	
NUMD5	0.88		5.484	
<b>Retirement planning (RP)</b>			0.882	0.714
RP2	0.835		1.494	
RP3	0.831		1.922	
<b>Safe and sound mind (SSM)</b>			0.936	0.83
SSM1		0.916	2.771	
SSM2		0.909	2.749	
SSM3		0.908	2.711	
<b>Savings (S)</b>			0.918	0.737
S1		0.878	2.493	
S2		0.893	2.986	
S3		0.855	2.481	
S4		0.806	1.885	

*Notes:* CR is composite reliability, and AVE is average variance extracted.

Source: Field Survey (2022)

### Validity of constructs

The study performed two tests (convergent validity and discriminant validity) to confirm construct validity. The study made use of the method advocated by Fornell and Larcker (1981), who posit that convergent validity is established when the AVE is at least 0.50, to test for convergent validity. Table 8 presents the convergent validity findings based on the AVE alongside the factor loadings, CR, CA and VIF. Convergent validity was not a concern in this investigation because all AVE numbers were higher than the suggested cut-off of 0.50. According to Table 8, the latent variable AVE statistics ranged from 0.640 to 0.881.

Cross-loadings, the Heterotrait-Monotrait (HTMT) ratio, and the Fornell and Larcker Criterion are methods for assessing the discriminant validity of various constructs. To determine the discriminant validity of the constructs utilized in this study, these measures (Cross-loadings, the Heterotrait-Monotrait (HTMT) ratio, and the Fornell and Larcker Criterion) were evaluated.

The Fornell and Larcker criterion, proposed by Fornell and Larcker (1981), states that a construct's square root of AVE should be greater than its correlation with every other construct in a particular model. Based on the square root of AVE and their relationships with other variables, Table 9 below presents the Fornell and Larcker criterion statistics. Since the square root of AVE for each construct proved to be greater than its co-movement with other constructs, the Fornell and Larcker criterion test results (see Table 9) demonstrated the convergent validity among the constructs used in the study.



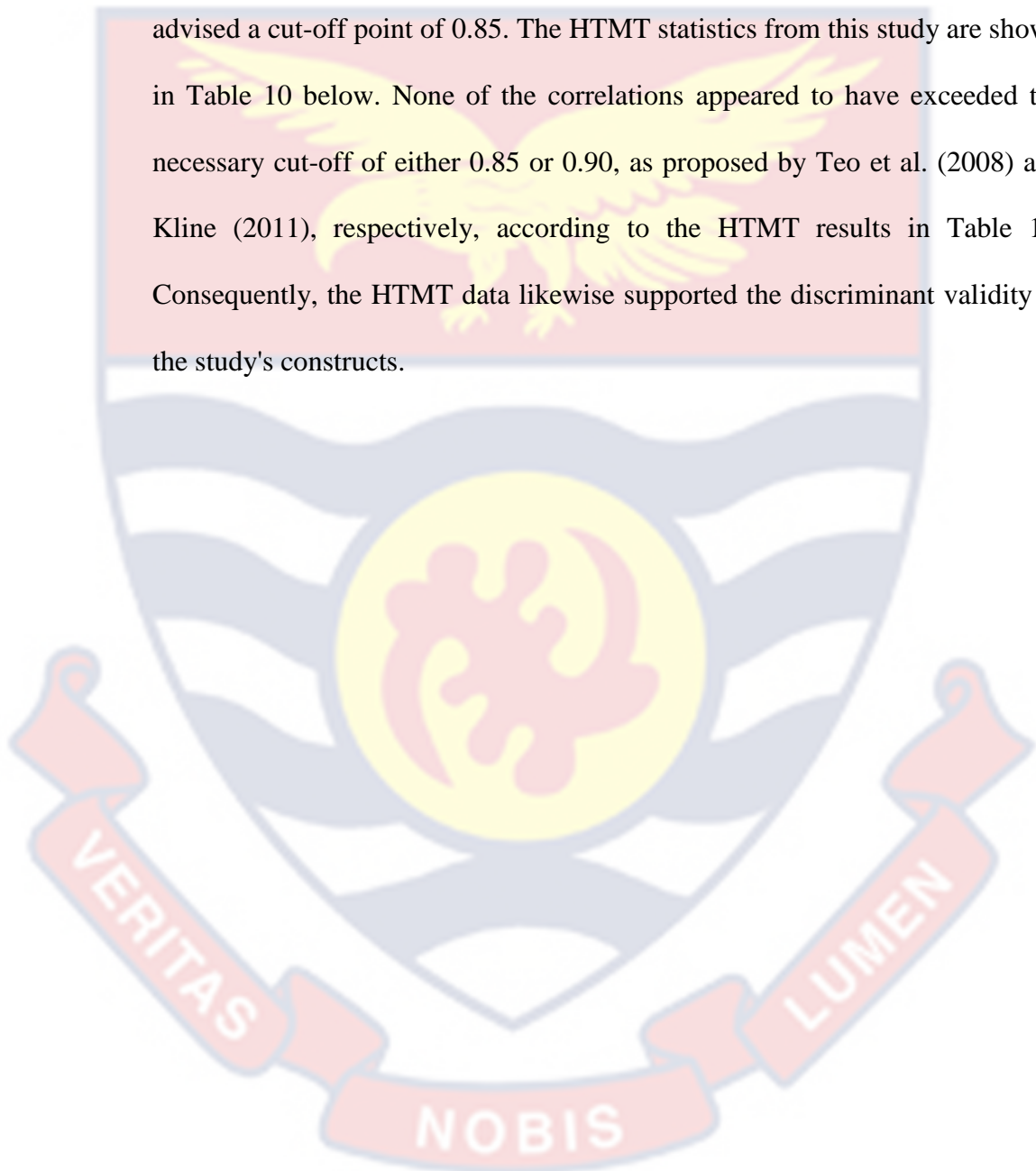
**Table 9: Square-root of AVE and indicator correlations**

Variable	AB	FA	FB	FBG	FK	FL	FP	FS	FWB	H	IP	NUMD	RP	SSM	S
AB	<b>0.864</b>														
FA	0.536	<b>0.869</b>													
FB	0.555	0.678	<b>0.755</b>												
FBG	0.426	0.436	0.581	<b>0.627</b>											
FK	0.45	0.548	0.503	0.557	<b>0.796</b>										
FL	0.56	0.816	0.725	0.608	0.585	<b>0.650</b>									
FP	0.491	0.59	0.548	0.504	0.665	0.514	<b>0.602</b>								
FS	0.414	0.629	0.542	0.506	0.695	0.577	0.569	<b>0.854</b>							
FWB	0.579	0.617	0.621	0.5	0.512	0.648	0.543	0.504	<b>0.755</b>						
H	0.504	0.432	0.483	0.472	0.358	0.483	0.433	0.42	0.740	<b>0.894</b>					
IP	0.272	0.421	0.391	0.435	0.524	0.522	0.486	0.384	0.313	0.236	<b>0.821</b>				
NUMD	0.132	0.023	0.03	0.251	0.178	0.087	0.208	0.021	0.121	0.102	0.159	<b>0.911</b>			
RP	0.31	0.414	0.326	0.466	0.449	0.46	0.464	0.331	0.313	0.204	0.635	0.27	<b>0.845</b>		
SSM	0.611	0.597	0.538	0.389	0.485	0.605	0.45	0.461	0.567	0.654	0.287	0.064	0.261	<b>0.911</b>	
S	0.498	0.563	0.388	0.576	0.553	0.627	0.528	0.526	0.533	0.399	0.506	0.029	0.48	0.44	<b>0.859</b>

*Notes:* figures in bold represent the square root of AVE for the given construct. Ability to meet needs (AB); Financial Attitude (FA); Financial Behavior (FB); Financial Budgeting (FBG); Financial Knowledge (FK); Financial Skills (FS); Happiness (H); Investment Planning (IP); Number of dependents (NUMD); Retirement planning (RP); Safe and sound mind (SSM); Savings (S)

Source: Field Survey (2022)

The estimated correlations between various constructs in a study serve as the HTMT's foundation for assessing discriminant validity. Conclusions regarding the threshold have not yet been made using this method. For instance, Teo et al. (2008) offered a cut-off point of 0.90 while (Kline, 2011) advised a cut-off point of 0.85. The HTMT statistics from this study are shown in Table 10 below. None of the correlations appeared to have exceeded the necessary cut-off of either 0.85 or 0.90, as proposed by Teo et al. (2008) and Kline (2011), respectively, according to the HTMT results in Table 10. Consequently, the HTMT data likewise supported the discriminant validity of the study's constructs.



**Table 10: Heterotrait-Monotrait ratio**

Construct	AB	FA	FB	FBG	FK	FL	FP	FS	FWB	H	IP	NUMD	RP	SSM	S
AB															
FA	0.591														
FB	0.693	0.872													
FBG	0.532	0.534	0.856												
FK	0.485	0.598	0.629	0.618											
FL	0.609	0.878	0.537	0.738	0.547										
FP	0.549	0.655	0.764	0.588	0.72	0.804									
FS	0.449	0.696	0.68	0.575	0.758	0.535	0.622								
FWB	0.561	0.676	0.785	0.601	0.545	0.697	0.6	0.544							
H	0.562	0.487	0.651	0.537	0.389	0.537	0.481	0.467	0.889						
IP	0.311	0.486	0.559	0.506	0.604	0.609	0.886	0.441	0.353	0.267					
NUMD	0.152	0.081	0.242	0.384	0.197	0.221	0.291	0.085	0.139	0.113	0.171				
RP	0.351	0.494	0.466	0.542	0.52	0.546	0.875	0.389	0.353	0.233	0.767	0.293			
SSM	0.672	0.667	0.683	0.483	0.529	0.655	0.507	0.507	0.94	0.732	0.332	0.076	0.303		
S	0.556	0.637	0.513	0.657	0.613	0.703	0.5	0.59	0.59	0.448	0.589	0.074	0.562	0.497	

*Notes:* Ability to meet needs (AB); Financial Attitude (FA); Financial Behavior (FB); Financial Budgeting (FBG); Financial Knowledge (FK); Financial Skills (FS); Happiness (H); Investment Planning (IP); Number of dependents (NUMD); Retirement planning (RP); Safe and sound mind (SSM); Savings (S)

Source: Field Survey (2022)

Cross-loadings, which evaluate whether an indicator for a construct loads much more heavily on its parent concept in comparison to other constructs in a model, are another way to quantify discriminant validity (Wasko & Faraj, 2005). Therefore, when evaluated on other constructs, a factor should load worse than when tested on its primary construct. Table 10A at appendix lists the various loadings. All indicators performed better when tested on their underlying constructs than when tested on other constructs in the study, according to the cross-loadings from Table 10A. As a result, cross-loadings statistics also proved the constructs used in this investigation were valid.

### Financial literacy and financial planning

The first objective of the study was to assess the relationship between the financial literacy and financial planning of informal sector workers in Cape Coast and Elmina. Based on the objective, the study hypothesized that:

H<sub>1</sub>: There is a positive relationship between financial literacy and financial planning of informal sector workers in Cape Coast and Elmina.

The results of the correlation are presented in figure 4. Table 11 presents the results of the study.

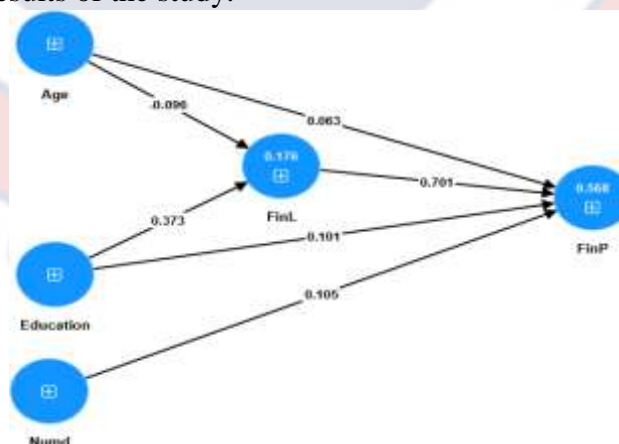


Figure 4: Structural model, Path coefficients, R squared. Notes: path coefficients in regular texts. R-squared values are in white fonts. Source: Smart-PLS

As the aim of  $H_1$  was to observe if the relationship between financial literacy (FL) and financial planning (FP) of informal sector workers is positive, the outcome showed that FL has a significant and positive relationship with FP ( $\beta = 0.701$ ;  $t=25.799$ ;  $p < 0.05$ ) as shown in Table 11.

Based on the findings of the study, we fail to reject  $H_1$  and conclude that there is a significant and a positive relationship between financial literacy and financial planning of informal sector workers.

**Table 11: Results of direct relationships and hypotheses test**

	Beta	SD	T-stat	P-values	CI	
					2.50%	97.50%
Age -> FinL	-0.096	0.053	1.788	0.074	-0.198	0.008
Age -> FinP	0.063	0.035	1.973	0.049	0.002	0.137
Education -> FinL	0.373	0.046	8.058	0.000	0.276	0.454
Education -> FinP	0.101	0.034	2.78	0.005	0.034	0.171
FinL -> FinP	0.701	0.028	25.799	0.000	0.649	0.759
Numd -> FinP	0.105	0.039	2.449	0.014	0.021	0.174
	R-square	R-square adjusted				
FinL	0.176	0.172				
FinP	0.568	0.564				

Source: Field Survey (2022)

This implies that the financial literacy can enhance the financial planning of the informal sector workers of both urban and rural activities in the Cape Coast and Elmina. The finding of this study is consistent with prior studies by Alkhawaja and Albaity (2020); Githui and Ngare (2014); Jimenez, Chiesa and Topa (2019); Shukla and Sharma (2019); Selvadurai et al. (2018); Kumar, Shukla and Sharma (2019); Larisa, Njo and Wijaya (2020); Safari, Njoka, and Munkwa (2021); and Joo and Grable (2004) who found that

financial literacy significantly influences financial planning in a positive for formal sector workers.

On the informal sector workers, Sarpong-Kumankoma (2021) and Ofori (2021) revealed that educational level positively influences retirement planning of the self-employed workers in Ghana, however, Ofori (2021) does not account for the relationship between financial literacy and financial planning. The finding of this study requires that other studies are done to verify the positive relationship between financial literacy and financial planning of informal sector workers of both urban and rural activities since no such study has been done.

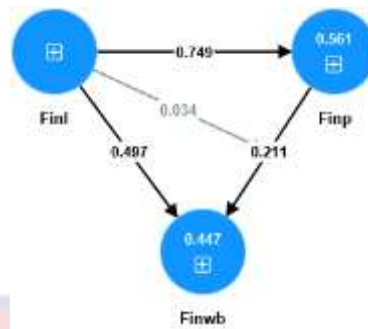
Coefficient of determination ( $R^2$ ) gives a view of the extent of explained dispersion in the dependent variable by the model caused by the independent variables.  $R^2$  of this study reveals a close to perfect fit model, implying that the dependent variable is well explained by the independent variables.

### **Financial literacy and financial well-being**

The study also sought to examine the relationship between financial literacy and financial well-being of informal sector workers in Cape Coast and Elmina. Based on the objective, the study hypothesized that:

H<sub>2</sub>: There is a positive relationship between financial literacy and financial well-being of informal sector workers in Cape Coast and Elmina.

The results of the correlation are presented in Figure 5. Table 12 presents the results of the study.



*Figure 5: Structural model, Path coefficients, R squared. Notes: path coefficients in regular texts. R-squared values are in white fonts. Source: Smart-PLS*

The study found that there is a significant and a positive relationship between financial literacy and financial well-being ( $\beta = 0.749$ ;  $t = 33.897$ ;  $p < 0.05$ ) of the informal sector workers of both urban and rural activities in Cape Coast and Elmina. Since the study found enough evidence to support the relationship between financial literacy and financial well-being, we fail to reject  $H_2$  and conclude that financial literacy significantly influences financial well-being in a positive way.

This implies that financial literacy can improve the financial well-being of the informal sector workers of both urban and rural activities in Cape Coast and Elmina. Consequently, a higher financial literacy would lead to higher financial well-being of the informal sector workers in Cape Coast and Elmina whereas a lower financial literacy would lead to lower financial well-being.

**Table 12: Results of direct relationships and hypotheses test**

	Beta	SD	T- stat	P- values	CI	
					2.50%	97.50%
Finl -> Finp	0.749	0.022	33.897	0.000	0.698	0.786
Finl -> Finwb	0.497	0.069	7.203	0.000	0.364	0.633
Finp -> Finwb	0.211	0.071	2.967	0.003	0.07	0.343
Finl x Finp -> Finwb	0.034	0.023	1.441	0.15	-0.013	0.078
	R-square	R-square adjusted				
FinP	0.561	0.557				
FinWB	0.447	0.444				

Source: Field Survey (2022)

The finding of this study is consistent with prior studies by Sabri and Gudmunson (2012) who found that financial literacy significantly influences perceived financial well-being. Taft et al (2013) similarly revealed that higher financial literacy leads to greater financial well-being. Adu-Asare (2018) and Amenuku (2018) also found a positive relationship between financial literacy and financial well-being of cocoa farmers in the Brong-Ahafo region of Ghana and artisanal fishermen in Elmina, respectively. Other studies also support the existence of a positive relationship between financial literacy and financial well-being (Ianole-Calin et al., 2021; Soepding et al., 2021; Prakitsuwan et al., 2020; Adam et al., 2017; Taft et al., 2013; Joo & Grabble, 2004). The results in this study support Adu-Asare (2018) and Amenuku (2018), that, financial literacy enhances financial well-being of informal sector workers.

### **Financial planning and financial well-being**

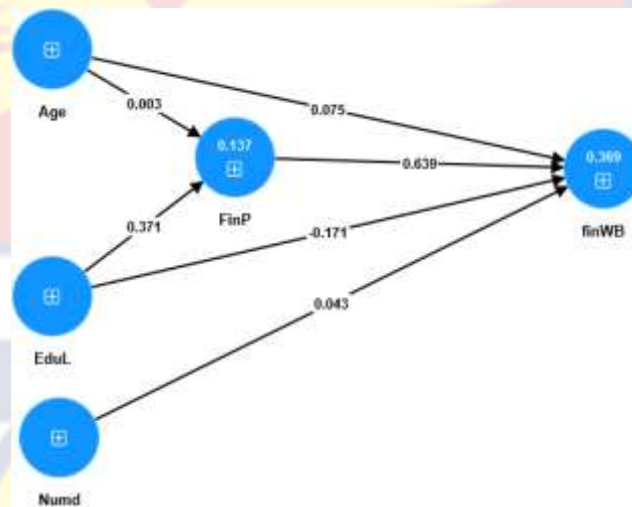
The third objective of the study was to examine the relationship between financial planning and financial well-being of informal sector



workers in Cape Coast and Elmina. Based on the objective, the study hypothesized that:

H<sub>3</sub>: There is a positive relationship between financial planning and financial well-being of informal sector workers in Cape Coast and Elmina.

The results of the correlation are presented in figure 6. Table 13 presents the results of the study.



*Figure 6:* Structural model, Path coefficients, R squared. *Notes:* path coefficients in regular texts. R-squared values are in white fonts. Source: Smart-PLS

The outcome showed that FP has a significant positive relationship with FWB ( $\beta = 0.639$ ;  $t = 17.213$ ;  $p < 0.05$ ). Hence we fail to reject H<sub>3</sub> and conclude that financial planning of informal sector workers in the Cape Coast and Elmina positively influences their financial well-being.

**Table 13: Results of direct relationships and hypotheses test**

	Beta	SD	T- stat	P- values	CI	
					2.50%	97.50%
Age -> FinP	0.003	0.057	0.132	0.895	-0.103	0.119
Age -> finWB	0.075	0.036	1.978	0.048	0.002	0.143
EduL -> FinP	0.371	0.051	7.268	0.000	0.272	0.466
EduL -> finWB	-0.171	0.047	3.757	0.000	-0.267	-0.08
FinP -> finWB	0.639	0.037	17.213	0.000	0.563	0.708
Numd -> finWB	0.043	0.047	0.934	0.35	-0.127	0.116
	R-square	R-square adjusted				
FinP	0.137	0.132				
FinWB	0.369	0.362				

Source: Field Survey (2022)

The result of this study implies that financial planning can enhance the financial well-being of the informal sector workers of both urban and rural activities in Cape Coast and Elmina, respectively. This finding supported is by Adam et al. (2017) who found a significant and a positive relationship between financial planning and the financial well-being of formal sector retirees in the Cape Coast Metropolis.

Financial planning is a powerful predictor of wealth accumulation because low wealth can be traced to lack of financial planning (Lusardi & Beeler, 2007) and those who plan have more than double the wealth of those who have not done any financial planning (Lusardi, 2008). This finding is similar to the findings of Wang and Hesketh (2012) who disclosed that financial planning has a positive effect and it is beneficial to the fiscal well-being of retirees.

If people who are financially literate apply the knowledge to manage their income effectively and as well plan for retirement, then they most likely

to be better off with regards to their financial well-being as informal sector workers. This will enable them to save and consume some of their income to smooth their consumption over the lifetime as posited by the theory.

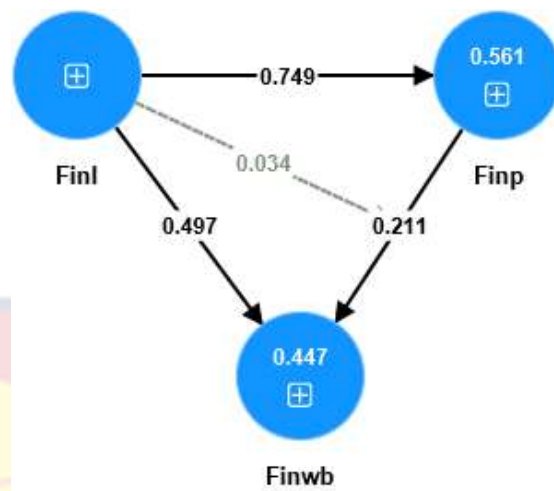
### **Mediation of financial planning in the relationship between financial literacy and financial well-being of informal sector workers**

The study also analysed the mediating role of financial planning in the relationship between financial literacy and financial well-being of informal sector workers in Cape Coast and Elmina. Based on the objective, the study hypothesized that:

H<sub>4</sub>: Financial planning mediates the relationship financial literacy and financial well-being of informal sector work in Cape Coast and Elmina.

A mediation analysis was conducted, and the significant outcomes are summarized in Table 14. Zhao et al. (2010) provide instructions for understanding the results of mediation analysis. Zhao et al. (2010) assert that mediation might be partial or complete, in addition to "no mediation." In cases where both the direct and indirect effects are significant, partial mediation is believed to exist whereas when only the indirect effect is significant but the direct effect is insignificant, complete mediation exists.

The results of the correlation are presented in figure 7. Table 14 presents the results of the study.



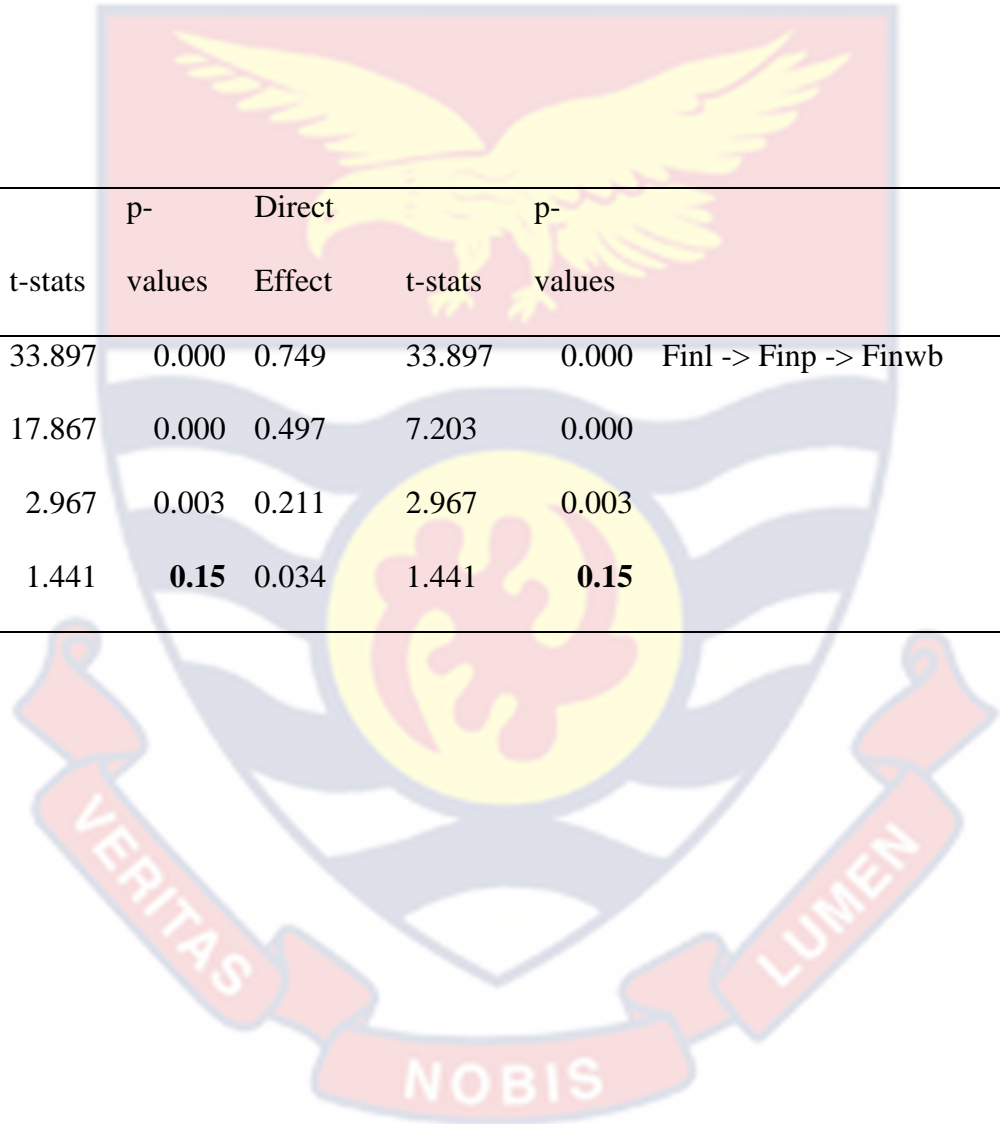
*Figure 7: Structural model, Path coefficients, R squared. Notes: path coefficients in regular texts. R-squared values are in white fonts. Source: Smart-PLS*

The simulated structure (figure 7) reveals that financial planning affects financial well-being via financial literacy. Both direct and indirect effects were found to be significant. Since FP was not found to significantly mediate the relationship between FL and FWB, we fail to reject  $H_4$  and conclude that for the informal sector workers in the Cape Coast and Elmina, financial planning partially mediates the relationship between financial literacy and financial well-being. This implies that those with financial literacy do plan financially and in thence, enjoy financial well-being. This finding is line with the human capital theory.

The finding of this study is consistent with the finding of Lusardi and Mitchell (2011), who found that financial planning significantly mediates the relationship between financial literacy and financial well-being. Tahir, Ahmed, and Richards (2021) also found that financial capability partially mediates the association between financial literacy and financial well-being. Oquaye, Owusu, and Bokpin (2020) revealed that financial behavior mediate the relationship between financial self-efficacy and financial well-being and

concluded that well-being impacts positively on happiness. Nonetheless, no study seem to have looked at the mediating role of financial planning in the relationship between financial literacy and financial well-being. This requires that other studies are done to verify the mediating role of financial planning in the relationship between financial literacy and financial well-being and that of the relationship between number of dependents and financial well-being of informal sector workers.





**Table 14: Mediation Analysis**

	Total		p-	Direct	p-		Indirect	p-		
	Effect	t-stats	values	Effect	t-stats	values	Effect	t-stats	values	
Finl -> Finp	0.749	33.897	0.000	0.749	33.897	0.000	Finl -> Finp -> Finwb	0.158	3.015	0.003
Finl -> Finwb	0.655	17.867	0.000	0.497	7.203	0.000				
Finp -> Finwb	0.211	2.967	0.003	0.211	2.967	0.003				
Finl x Finp -> Finwb	0.034	1.441	<b>0.15</b>	0.034	1.441	<b>0.15</b>				

Source: Field Survey (2022)

### **Moderating effect of financial literacy on the relationship between financial planning and financial well-being of informal sector workers**

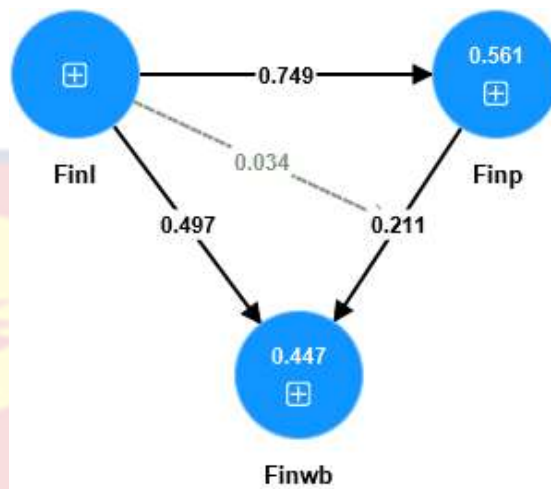
The fifth objective of the study was to analyse the moderating role of financial literacy on the relationship between financial planning and financial well-being of informal sector workers in Cape Coast and Elmina. Based on the objective, the study hypothesized that:

H<sub>5</sub>: Financial literacy moderates the relationship between financial planning and financial well-being of informal sector workers in Cape Coast and Elmina.

A moderation analysis was conducted to examine the interactive effect of financial literacy on financial planning and financial well-being. Moderation effect strengthens or weakens the relationship between independent variable(s) and dependent variable (s). The results of the study are presented in figure 8 and Table 12.

The study found financial literacy to positively moderate the relationship between financial planning and financial well-being ( $\beta = 0.034$ ;  $p > 0.05$ ), however, the finding was not significant. Since FL was not found to significantly moderate the relationship between FP and FWB, we reject H<sub>5</sub> and conclude that for the informal sector workers in the Cape Coast and Elmina, financial literacy does not strengthen the relationship between financial planning and financial well-being. This could be as a result of the low level of financial literacy of the informal sector workers in Cape Coast and Elmina and the low level of applying their financial literacy in planning financially. It can be inferred that although the informal sector workers of both urban and rural activities have some level of financial literacy, how their financial planning

correlates with their financial well-being is not strengthened by their level of financial literacy.



*Figure 8: Structural model, Path coefficients, R squared. Notes: path coefficients in regular texts. R-squared values are in white fonts. Source: Smart-PLS*

Findings of this study is in line with the findings of Lusardi and Mitchell (2014), who revealed that financial literacy moderates the relationship between financial planning and financial well-being. Mutlu and Özer (2021) found that financial literacy changes the relationship between internal locus of control and financial behavior. A study by Bongomin et al. (2017) revealed that financial literacy positively moderates the relationship between access to finance and growth of SMEs in developing economies. However, Hayat and Anwar (2016) revealed that financial literacy has negative moderating role in herding bias and positive moderating role of overconfidence bias in investment decision.

The summary of the correlation findings of the study and hypotheses tests are presented in Table 15.



**Table 15: Summary of results and implied mediations**

	Beta	p-values	Comment/Decision
Finl -> Finp	0.749	0.000	Supported
Finl -> Finwb	0.497	0.000	Supported
Finp -> Finwb	0.211	0.003	Supported
Finl x Finp -> Finwb	0.034	<b>0.15</b>	not supported
Age -> FinL	-0.096	<b>0.074</b>	not supported
Age -> FinP	0.063	0.049	Supported
Age -> finWB	0.075	0.048	Supported
Education -> FinL	0.373	0.000	Supported
EduL -> FinP	0.371	0.000	Supported
EduL -> finWB	-0.171	0.000	Supported
Numd -> FinP	0.105	0.014	Supported
Numd -> finWB	0.043	<b>0.35</b>	not supported
<b>implied Mediations</b>			
Finl -> Finp -> Finwb			Partial Moderation
Education -> FinL -> FinP			Partial Mediation
EduL -> FinP -> finWB			Partial Mediation
Age -> FinL -> FinP			NoMediation
Age -> FinP -> finWB			No Mediation

Source: Field Survey (2022)

### **Nexus between demographics and financial literacy, financial planning, and financial well-being**

The study further examined the impact of demographics (age, educational level, and number of dependents) on financial literacy, financial planning, and financial well-being. The results of the study are presented in Figure 9 and Table 15.

Level of education was found to have a significant positive influence on financial literacy and financial planning. The findings of the study that level of education positively influences financial literacy and financial planning of the informal sector workers in Cape Coast and Elmina is consistent with the findings of Al-Tamimi & Hussain, (2009) who found that people who hold high educational degrees have higher financial literacy level than others. According to Chen and Volpe (2002), education can have impact

on financial literacy. Financial literacy then impacts on financial well-being since the ultimate measure of success for financial literacy efforts should be individual financial well-being (Consumer Financial Protection Bureau, 2015).

Age was found to have a negative relationship with financial literacy but a positive impact on financial planning and financial well-being. Nonetheless, the negative relationship between age and financial literacy was not significant ( $p > 0.05$ ) whereas the positive relationship between age and financial planning; and age and financial well-being were significant ( $p < 0.05$ ).

The impact of number of dependents on financial planning and financial well-being were all revealed to be positive. Nonetheless, only the positive impact of number of dependents on financial planning was significant ( $p < 0.05$ ). The positive impact of number of dependents on financial well-being was revealed to be insignificant ( $p > 0.05$ ).

The results imply that the higher the number of dependents, the more informal sector workers in Cape Coast and Elmina plan financially. The finding of this study is consistent with that of Adam et al. (2017) who revealed that number of dependents significantly influence the retirement planning of the retirees of the formal sector workers in the Cape Coast Metropolis in a positive way but insignificantly influence financial well-being. However, Wang and Hesketh (2012), Lusardi and Beeler (2006), Grinstein-Weiss, Wagner, and Ssewamala, (2006) revealed that responsibilities associated with number of dependents (nuclear family and extended family relatives) heads to minimum wealth holding seem to support the finding of this study.

Wang and Hesketh (2012); Lusardi and Beeler (2006); and Grinstein-Weiss, Wagner, and Ssewamala, (2006) revealed in their studies that the number of dependents a worker has negative effect on the fiscal well-being of the worker. Adu-Asare (2018) also found a negative relationship between number of dependents and financial well-being of cocoa farmers in the Brong-Ahafo region of Ghana.

This result could be that because wealthy family members and community leaders provide education, health care, housing and other personal maintenance to others, even beyond their extended family relationships, individuals in the informal sector depend more on other relatives for their financial well-being as posited by the social support hypothesis.

### **Chapter Summary**

This chapter looked at the results and discussed the results with their implications using structural model which was analysed by SMART-PLS (SEM). In terms of the relationship between the response and predictor variables, the study found a positive significant relationship between financial literacy and financial planning; financial literacy and financial well-being; and financial planning and financial well-being.

It was also revealed by the study that the types of financial planning informal sector workers have are savings, susu, money box, fixed deposit and treasury bill. School fees, utility bills, unforeseen expenses/demands, rent and property goals were the factors that were revealed to encourage the informal sector workers to plan financially. Majority (50.74%) of the informal sector workers were revealed to wish to participate in retirement as compared to those who do not see a need to participate in retirement planning.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

The purpose of the research was to analyse the relationship between financial literacy, financial planning, and financial well-being of informal sector workers in Cape Coast and Elmina. This study employed the descriptive research design under quantitative research method, particularly, survey research method. This chapter presents the summary of the study and key findings, conclusion, recommendations, and suggestion for further studies.

#### Summary of the study

Specifically, the study sought to:

1. assess the relationship between the financial literacy and financial planning of informal sector workers in Cape Coast and Elmina.
2. examine the relationship between financial literacy and financial well-being of informal sector workers in Cape Coast and Elmina.
3. examine the relationship between financial planning and financial well-being of informal sector workers in Cape Coast and Elmina.
4. analyse the mediating role of financial planning in the relationship between financial literacy and financial well-being of informal sector workers in Cape Coast and Elmina.
5. examine the moderating effect of financial literacy on the relationship between financial planning and financial well-being in Cape Coast and Elmina.

Based on the objectives, the study hypothesized the following:

H<sub>1</sub>: There is a positive relationship between financial literacy and financial planning of informal sector workers in Cape Coast and Elmina.

H<sub>2</sub>: There is a positive relationship between financial literacy and financial well-being of informal sector workers in Cape Coast and Elmina.

H<sub>3</sub>: There is a positive relationship between financial planning and financial well-being of informal sector work in Cape Coast and Elmina.

H<sub>4</sub>: Financial planning mediates the relationship between financial literacy and financial well-being of informal sector work in Cape Coast and Elmina.

H<sub>5</sub>: Financial literacy moderates the relationship between financial planning and financial well-being of informal sector workers in Cape Coast and Elmina.

### **Summary of key findings**

The study found that the relationship between financial literacy and financial planning was positive and significant. That implies that financial literacy of informal sector workers in Cape Coast and Elmina enhances their financial planning. Thus, the study failed to reject the hypotheses that there is a positive relationship between financial literacy and financial planning.

The study also found a positive significant relationship between financial literacy and financial well-being. This led to the rejection of the second hypotheses with implication that financial literacy of informal sector workers in Cape Coast and Elmina improves the financial well-being of the workers in a positive way.

The relationship between financial planning and financial well-being of informal sector workers in Cape Coast and Elmina was revealed to be positive and significant. Hence, the study failed to reject the hypotheses that there is a positive relationship between financial planning and financial well-being. This signifies that financial planning of informal sector workers can improve the financial well-being of the informal sector workers.

Financial planning was also found to significantly mediate the relationship between financial literacy and financial well-being. Hence, the fourth hypotheses was also not rejected.

Positive moderation effect of financial literacy on the relationship between financial planning and financial well-being was found, albeit insignificant. Since FL was not found to significantly moderate the relationship between FP and FWB, the study rejected H<sub>5</sub> and concluded that for the informal sector workers in the Cape Coast and Elmina, financial literacy does not strengthen the relationship between financial planning and financial well-being.

### **Conclusion**

This research gives some illumination of the indicators that affects the financial well-being of informal sector workers in Ghana by engaging three (3) constructs, being financial literacy, financial planning and number of dependents. Statistical analysis such as regression, correlation, path and factor analysis were conducted using a structural equation model procedure. Upon assessing the outcome of this research, the study affirmed that there is an association between the predictor variables (financial literacy, financial planning, and number of dependents) and the response variables (financial planning and financial well-being).

Outcome of this study met the objectives of this research. It was revealed that the relationship between financial literacy and financial planning; financial literacy and financial well-being; and financial planning and financial well-being is positive and significant. The study also revealed that financial planning partially mediates the relationship between financial

well-being and financial planning. Nonetheless, the moderating effect of financial literacy on the relationship between financial planning and financial well-being was revealed to be insignificant.

Although the finding on the relationship between level of education and financial planning of the informal sector workers by this study is not novel, as such relationship has been addressed by Adu-Asare (2018) and Amenuku (2018), the study seems to provide novel grounds concerning the relationship between financial planning and financial well-being of the informal sector workers in Cape Coast and Elmina; financial literacy and financial planning of the informal sector workers in Cape Coast and Elmina; and the impact of demographics of informal sector workers on financial literacy, financial planning, and financial well-being. Moreover, this study provides novel grounds for the mediation between financial literacy and financial well-being of informal sector workers in Ghana.

Concerning respondent demographic indicators, the outcome revealed that respondents aged 21-30 constituted majority of the informal sector workers in Ghana, nonetheless, impact of demographic indicators like gender and marital status were not actually analyzed to examine if they could be influencing indicators of the financial well-being of the informal sector workers. Although some of the outcomes of this research were found to be consistent with previous studies by other researchers, some of the outcomes were also found to be inconsistent with other studies by some other researchers.

Most of the informal sector workers (63.24%) were observed to have no financial plan to meet their retirement needs. This could be as a result of

the majority (75%) of the informal sector workers being ignorant about optional pension plan (tier 3). Means by which the informal sector workers obtain financial knowledge was found to be mostly (59.56%) from friends, family and co-workers. However, 225 (55.15%) out of the 408 respondents also indicated to obtain financial knowledge from television, whereas those who obtained financial knowledge from radio and face-to-face communications with financial institutions were 222 (54.41%) and 201(49.26%), respectively. Evidently, the obtaining of financial knowledge by face-to-face communications with financial institutions recorded the lowest.

Overall, the study makes contribution to a better understanding of the problem and/or to its solution, however, the study did not look at the impact of all demographic indicators, cultural dominance, and religious orientation on financial well-being.

### **Recommendations**

Based on the findings of the study, the study recommends that:

1. The government and financial institutions make an effort to offer more financial education to the informal sector workers in Cape Coast and Elmina. Since a positive and significant relationship was revealed to exist between financial literacy and financial planning, more literacy on finance would help the informal sector workers to plan more. This would, overall, give room for financial institutions to create more wealth and contribute to national development. Not only would financial institutions be able to create more wealth, but the informal sector workers would also have better financial well-being which will cushion them to work more to contribute to the economy of the country



since the study also revealed that there is a significant positive relationship between financial literacy and financial well-being; and financial planning and financial well-being.

2. Since many are not aware of the tier 3 pension contribution but are willing to make contribution towards pension, the study recommends to various financial institutions (particularly trustee pension firms) to make more sacrifices in reaching out to informal sector workers to educate them about the optional pension plan and motivate them to enrol on a pension plan ahead of their old age where they may not be able to work effectively due to weakness of the body. To add to that, the optional pension plans of trustees could be made more accommodative in terms of amount to deposit per month and flexibility of payment in order to attract more of the informal sector workers, including those who do not really earn much.
3. On a last note, the government can adopt a strategy to enforce pension contribution of informal sector workers as some of the retirees in the informal sector seem to have dependents who if are not taken good care of, may venture into social vices and cause problems to many lives due to poverty.

#### **Suggestion for Further Studies**

This study offers fertile ground for future studies on how financial literacy and financial planning play an important role on the financial well-being of informal sector workers in the Cape Coast and Elmina. Nonetheless, there are other key things that may possibly influence the financial well-being of informal sector workers, aside financial literacy and financial planning. One

may consider looking at how some other demographic indicators, cultural dominance, religious orientation, financial concerns, and among others, influence the financial well-being of informal sector workers for further studies or look at expanding this study by adding other regions.



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## APPENDICES

## APPENDIX A

## UNIVERSITY OF CAPE COAST

## FACULTY OF HUMANITIES AND LEGAL STUDIES

## SCHOOL OF BUSINESS

## DEPARTMENT OF FINANCE

## QUESTIONNAIRE FOR INFORMAL SECTOR WORKERS

Dear Respondent,

This questionnaire is to assist the researcher to collect data on financial literacy, financial planning and financial well-being. The study is solely for academic purposes and for that matter you are assured that any information provided will be confidential.

**DIRECTION:** *Please indicate your response to each question by selecting the most appropriate answer for each question*

**SECTION A: DEMOGRAPHIC DATA**

1. What is your gender?

Male  Female

2. What is your age?

up to 20  21-30  31-40  41-50  51 and above

3. What is Your highest level of education reached

Never been to School  primary  JSS  SSS  Tertiary

4. What sector of occupation do you fall under?

Formal Sector

Informal Sector

5. Which categories of activity of the informal sector are you currently employed?

[Rural activity entails fishing and fishing processing, agro-based processing, and Farming; Urban activity entails services, manufacturing, and construction activities]

Rural Activity

Urban Activity

6. Which of these Rural Activities of the informal sector are you engaged in?

Fishing and fishing processing,

Agro-based processing,

Farming

Others

7. Which of these Urban Activities of the informal sector are you engaged in?

The services activities

The Construction activities

The Manufacturing activities

Others

8. Under which classification of the construction activities do you find yourself?

Masons

Carpenters

Steel benders

Small-scale plumbers

House-wiring electricians, and carpenters whereas

Others

9. Under which classification of the manufacturing activities do you find yourself?

- Food processing
- Textile and garments
- Wood processing and metal works
- Others

10. Under which classification of the Services activities do you find yourself?

- Food traders and processors
- Chemical sellers
- Drugstore operators
- Funeral undertakers
- Night soil carriers
- Refuse collectors
- Traditional/herbal healers
- Attendants in private maternity homes
- Traditional birth attendants
- Repairers of watches
- Refrigeration equipment
- Radios, mechanical or electrical/electronic equipment
- Auto mechanics
- Sprayers
- Welders
- Technician
- Vulcanizers
- Auto electricians
- Graphic designers
- Audio-visual workers - photographers
- Cinema/video operators,
- Performers, musicians and film-makers,
- Hairdressers and barbers
- Private security men.



**SECTION B: FINANCIAL LITERACY**

This section solicits your financial literacy level. On a scale of 1 to 5, indicate your level of agreement on the following measures.

(1) SD= Strongly Disagree (2) D= Disagree (3) NC= Not Certain (4)

A=Agree (5) SA= Strongly Agree

	<b>Financial Knowledge</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
11.	I am knowledgeable about financial risks					
12.	I can easily compute interest rates					
13.	I can easily understand simple financial terms					
14.	I am knowledgeable about investment risks					
15.	I am knowledgeable enough to make a good financial decision					
16.	I am mathematically inclined to calculate all financial dealings					
17.	I know the requirements for opening an account.					
18.	I am knowledgeable about insurance products.					

	<b>Financial Skills</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
19.	I do have the ability to prepare a personal budget					
20.	I do have the ability to decide what financial services to choose					
21.	I do have the ability to accurately calculate the return on the investment I choose					
22.	I do have the ability to accurately determine the cost of my financial dealings					
23.	I am capable of evaluating different financial products and services					

	<b>Financial Attitude</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
24.	I feel capable of using my future income to achieve my financial goals					
25.	I am certain about where my money is spent					
26.	I feel putting away money each month for savings or investments is important					
27.	I feel it is important to understand leases and loan agreements before I sign					

	<b>Financial Behaviour</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
28.	My income each month is regular and reliable					
29.	I normally choose products that do not suit my needs and conditions					
30.	I maintain adequate financial records					
31.	I normally spend more than my income					
32.	I normally borrow to balance my personal budget					
33.	I am confident in my financial decision making					

34. I obtain financial knowledge through

- Face-to-face communication with the financial institutions,
- Radio
- Televisions

**SECTION C: FINANCIAL PLANNING**

This section solicits the types of financial plans you use and your level of financial planning.

**Types of Financial Plans:**

35. Which of the following type of financial plans do you apply?

- Money box    Susu    Savings    Fixed deposit    Treasury bill

**The key factors that encourage informal sector workers to financially plan**

36. Which of the following reasons make you plan financially?

- School Fees    Utility bills    Rent    Property goals    Unforeseen expenses/demands

37. Do you have any financial plans to specifically meet your retirement needs?

- Yes    No

38. Are you aware of tier 3 (optional pension contribution plan)?

- Yes    No

39. What type of retirement plan do you apply?

- Tier 3 contribution (optional pension plan)

- Life assurance policy

- I invest in my children and other family members so that they will look after me when I retire

- I invest in properties (lands, building, etc) as my retirement plan

- Others

40. Would you like to make financial contributions to a pension scheme in view of your retirement in the future?

Yes  No

This section solicits your **level of financial planning**. On a scale of 1 to 5, indicate your level of financial well-being on the following measures.

(1) SD= Strongly Disagree (2) D= Disagree (3) NC= Not Certain (4)

A=Agree (5) SA= Strongly Agree

<b>Financial Budgeting</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
41.	I normally choose products that do not suit my needs and conditions					
42.	I do maintain adequate financial records					
43.	I normally borrow to balance my personal budget					
44.	I am not confident in my financial decisions					
<b>Savings</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
45.	I have savings account					
46.	I make emergency fund/savings from my income					
47.	I have been saving part of income every month at least for the last 3months					
48.	I see a need to have savings plan					

<b>Investment Plan</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
49.	I know what investment is					
50.	I have investment account					
51.	I have plans for any investment					
52.	I see a need for investment					

	<b>Retirement Plan</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
53.	I have hopes of retiring one day					
54.	I have financial commitment for retirement					
55.	I see a need for retirement plans					

### Frequency of Financial Planning

	Under frequency, choose (1) daily, (2) weekly, (3) monthly, (4) quarterly or (5) yearly	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
56.	Saving					
57.	Investment					
58.	Paying Bills					
59.	Cash Withdrawal					

	<b>Financial attitudes</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
60.	I do feel capable of using my future income to achieve my financial goals					
61.	I am certain about where my money is spent					
62.	Purchasing things is very important to my happiness					
63.	I am afraid of credit and the usage of credit cards					
64.	I feel the cost of using a credit card is not too high					
65.	I feel putting away money each month for savings or investments is not important					
66.	I feel it is not important to understand leases and loan agreements before I sign					

**SECTION D: FINANCIAL WELL-BEING**

This section solicits your level of financial well-being. On a scale of 1 to 5, indicate your level of financial well-being on the following measures.

(1) SD= Strongly Disagree (2) D= Disagree (3) NC= Not Certain (4) A=Agree (5) SA= Strongly Agree

	<b>Ability to meet on-going needs/responsibility</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
67.	I am able to afford 3-square meal					
68.	I am able to afford rent payment					
69.	I am able to afford clothes for myself and family					
70.	I am able to pay utility bills					
71.	I am able to pay school fees					

	<b>Happiness about the current income or expenditure</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
72.	My income (wages/salary) is enough to make happy					
73.	I am able to meet my expenses to my level of happiness					
74.	I can save part of my income aside my expenditure					

	<b>Number of Dependents</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
75.	The number of my dependents influence my ability to afford 3-square meal					
76.	The number of my dependents influence my ability to afford rent payment					
77.	The number of my dependents influence my ability to afford clothes for myself and family					
78.	The number of my dependents influence my ability to pay utility bills					
79.	The number of my dependents influence my ability to pay school fees					

	<b>Safe and sound mind regarding the future in terms of finance</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
80.	I am able to make among choices that allow life to be enjoyed					
81.	I have safe and sound mind regarding my finance in future					
82.	I believe at my old age I would still be able to meet essential needs					

THANKS FOR PARTICIPATING IN THIS EXERCISE

## APPENDIX B

Table 10A: Cross loadings

Items	AB	FA	FB	FBG	FK	FL	FP	FS	FWB	H	IP	NUMD	RP	SSM	S
FINL(FA1)	0.485	0.835	0.626	0.402	0.477	0.712	0.485	0.567	0.595	0.497	0.325	0.096	0.373	0.552	0.42
FINL(FA1)	0.485	0.835	0.626	0.402	0.477	0.712	0.485	0.567	0.595	0.497	0.325	0.096	0.373	0.552	0.42
FINL(FA2)	0.45	0.884	0.564	0.381	0.397	0.67	0.471	0.536	0.52	0.372	0.287	0.025	0.306	0.5	0.47
FINL(FA2)	0.45	0.884	0.564	0.381	0.397	0.67	0.471	0.536	0.52	0.372	0.287	0.025	0.306	0.5	0.47
FINL(FA3)	0.485	0.904	0.574	0.377	0.504	0.736	0.556	0.573	0.512	0.3	0.408	0.022	0.393	0.488	0.555
FINL(FA3)	0.485	0.904	0.574	0.377	0.504	0.736	0.556	0.573	0.512	0.3	0.408	0.022	0.393	0.488	0.555
FINL(FA4)	0.44	0.85	0.592	0.355	0.522	0.713	0.532	0.507	0.516	0.333	0.436	-0.062	0.361	0.534	0.509
FINL(FA4)	0.44	0.85	0.592	0.355	0.522	0.713	0.532	0.507	0.516	0.333	0.436	-0.062	0.361	0.534	0.509
FINL(FB1)	0.33	0.434	0.702	0.382	0.252	0.448	0.368	0.35	0.461	0.463	0.248	-0.172	0.2	0.424	0.296
FINL(FB1)	0.33	0.434	0.702	0.382	0.252	0.448	0.368	0.35	0.461	0.463	0.248	-0.172	0.2	0.424	0.296
FINL(FB3)	0.29	0.393	0.698	0.485	0.347	0.445	0.465	0.275	0.296	0.245	0.425	0.21	0.359	0.209	0.217
FINL(FB3)	0.29	0.393	0.698	0.485	0.347	0.445	0.465	0.275	0.296	0.245	0.425	0.21	0.359	0.209	0.217
FINL(FB6)	0.575	0.658	0.854	0.461	0.498	0.698	0.427	0.549	0.603	0.392	0.254	0.03	0.214	0.535	0.351
FINL(FB6)	0.575	0.658	0.854	0.461	0.498	0.698	0.427	0.549	0.603	0.392	0.254	0.03	0.214	0.535	0.351
FINL(FK1)	0.402	0.517	0.453	0.42	0.735	0.723	0.502	0.592	0.477	0.292	0.313	0.019	0.355	0.513	0.468
FINL(FK1)	0.402	0.517	0.453	0.42	0.735	0.723	0.502	0.592	0.477	0.292	0.313	0.019	0.355	0.513	0.468
FINL(FK2)	0.225	0.226	0.274	0.424	0.771	0.596	0.51	0.497	0.239	0.165	0.48	0.21	0.45	0.205	0.3
FINL(FK2)	0.225	0.226	0.274	0.424	0.771	0.596	0.51	0.497	0.239	0.165	0.48	0.21	0.45	0.205	0.3
FINL(FK3)	0.432	0.457	0.483	0.418	0.817	0.753	0.47	0.613	0.475	0.319	0.274	0.036	0.292	0.441	0.459
FINL(FK3)	0.432	0.457	0.483	0.418	0.817	0.753	0.47	0.613	0.475	0.319	0.274	0.036	0.292	0.441	0.459
FINL(FK4)	0.239	0.374	0.368	0.565	0.822	0.714	0.632	0.628	0.287	0.244	0.563	0.237	0.46	0.253	0.424
FINL(FK4)	0.239	0.374	0.368	0.565	0.822	0.714	0.632	0.628	0.287	0.244	0.563	0.237	0.46	0.253	0.424

Items	AB	FA	FB	FBG	FK	FL	FP	FS	FWB	H	IP	NUMD	RP	SSM	S
FINL(FK5)	0.436	0.547	0.408	0.483	0.83	0.75	0.562	0.548	0.5	0.352	0.441	0.187	0.351	0.477	0.476
FINL(FK5)	0.436	0.547	0.408	0.483	0.83	0.75	0.562	0.548	0.5	0.352	0.441	0.187	0.351	0.477	0.476
FINL(FK6)	0.383	0.468	0.43	0.445	0.829	0.738	0.54	0.569	0.416	0.297	0.444	0.116	0.301	0.365	0.483
FINL(FK6)	0.383	0.468	0.43	0.445	0.829	0.738	0.54	0.569	0.416	0.297	0.444	0.116	0.301	0.365	0.483
FINL(FK7)	0.437	0.519	0.434	0.346	0.745	0.676	0.473	0.442	0.49	0.305	0.301	0.098	0.324	0.49	0.497
FINL(FK8)	0.28	0.341	0.321	0.44	0.812	0.66	0.542	0.515	0.338	0.28	0.545	0.252	0.348	0.307	0.388
FINL(FK8)	0.28	0.341	0.321	0.44	0.812	0.66	0.542	0.515	0.338	0.28	0.545	0.252	0.348	0.307	0.388
FINL(FS1)	0.31	0.504	0.398	0.476	0.554	0.708	0.543	0.833	0.394	0.326	0.373	0.012	0.296	0.38	0.521
FINL(FS1)	0.31	0.504	0.398	0.476	0.554	0.708	0.543	0.833	0.394	0.326	0.373	0.012	0.296	0.38	0.521
FINL(FS2)	0.406	0.608	0.517	0.465	0.599	0.782	0.539	0.862	0.463	0.336	0.366	0.051	0.327	0.431	0.502
FINL(FS2)	0.406	0.608	0.517	0.465	0.599	0.782	0.539	0.862	0.463	0.336	0.366	0.051	0.327	0.431	0.502
FINL(FS3)	0.298	0.471	0.401	0.425	0.606	0.733	0.474	0.869	0.379	0.362	0.332	0.032	0.284	0.326	0.426
FINL(FS3)	0.298	0.471	0.401	0.425	0.606	0.733	0.474	0.869	0.379	0.362	0.332	0.032	0.284	0.326	0.426
FINL(FS4)	0.415	0.589	0.537	0.381	0.637	0.795	0.438	0.855	0.495	0.351	0.276	-0.074	0.257	0.493	0.424
FINL(FS4)	0.415	0.589	0.537	0.381	0.637	0.795	0.438	0.855	0.495	0.351	0.276	-0.074	0.257	0.493	0.424
FINL(FS5)	0.328	0.501	0.45	0.418	0.565	0.721	0.436	0.849	0.413	0.421	0.297	0.075	0.249	0.326	0.373
FINL(FS5)	0.328	0.501	0.45	0.418	0.565	0.721	0.436	0.849	0.413	0.421	0.297	0.075	0.249	0.326	0.373
FP(FBG1)	0.122	0.139	-0.02	0.21	0.036	0.062	0.011	0.089	-0.155	0.086	-0.011	0.341	0.055	-0.185	-0.197
FP(FBG1)	0.122	0.139	-0.02	0.21	0.036	0.062	0.011	0.089	-0.155	0.086	-0.011	0.341	0.055	-0.185	-0.197
FP(FBG2)	0.168	0.125	0.212	0.191	0.107	0.141	0.037	0.09	0.137	0.078	-0.192	0.137	0.159	0.078	-0.053
FP(FBG2)	0.168	0.125	0.212	0.191	0.107	0.141	0.037	0.09	0.137	0.078	-0.192	0.137	0.159	0.078	-0.053
FP(FBG3)	0.449	0.509	0.576	0.569	0.41	0.562	0.456	0.497	0.476	0.344	0.167	-0.073	0.22	0.4	0.386
FP(FBG3)	0.449	0.509	0.576	0.569	0.41	0.562	0.456	0.497	0.476	0.344	0.167	-0.073	0.22	0.4	0.386
FP(FBG4)	0.249	0.239	0.302	0.729	0.368	0.354	0.67	0.278	0.272	0.294	0.445	0.39	0.536	0.153	0.429
FP(FBG4)	0.249	0.239	0.302	0.729	0.368	0.354	0.67	0.278	0.272	0.294	0.445	0.39	0.536	0.153	0.429



Items	AB	FA	FB	FBG	FK	FL	FP	FS	FWB	H	IP	NUMD	RP	SSM	S
FP(IP1)	0.349	0.529	0.453	0.359	0.533	0.595	0.649	0.467	0.366	0.239	0.788	0.068	0.502	0.323	0.444
FP(IP1)	0.349	0.529	0.453	0.359	0.533	0.595	0.649	0.467	0.366	0.239	0.788	0.068	0.502	0.323	0.444
FP(IP2)	0.116	0.175	0.176	0.39	0.315	0.26	0.634	0.16	0.209	0.229	0.825	0.161	0.461	0.22	0.406
FP(IP3)	0.198	0.259	0.359	0.407	0.378	0.375	0.67	0.28	0.246	0.22	0.853	0.176	0.52	0.215	0.421
FP(IP3)	0.198	0.259	0.359	0.407	0.378	0.375	0.67	0.28	0.246	0.22	0.853	0.176	0.52	0.215	0.421
FP(IP4)	0.228	0.42	0.288	0.267	0.498	0.484	0.624	0.354	0.206	0.081	0.815	0.118	0.603	0.183	0.388
FP(IP4)	0.228	0.42	0.288	0.267	0.498	0.484	0.624	0.354	0.206	0.081	0.815	0.118	0.603	0.183	0.388
FP(RP1)	0.259	0.435	0.306	0.349	0.382	0.433	0.634	0.323	0.261	0.141	0.496	0.132	0.868	0.241	0.43
FP(RP1)	0.259	0.435	0.306	0.349	0.382	0.433	0.634	0.323	0.261	0.141	0.496	0.132	0.868	0.241	0.43
FP(RP2)	0.332	0.269	0.318	0.531	0.426	0.384	0.727	0.255	0.34	0.27	0.609	0.323	0.835	0.247	0.452
FP(RP2)	0.332	0.269	0.318	0.531	0.426	0.384	0.727	0.255	0.34	0.27	0.609	0.323	0.835	0.247	0.452
FP(RP3)	0.172	0.359	0.185	0.265	0.316	0.345	0.552	0.264	0.17	0.08	0.488	0.212	0.831	0.162	0.315
FP(RP3)	0.172	0.359	0.185	0.265	0.316	0.345	0.552	0.264	0.17	0.08	0.488	0.212	0.831	0.162	0.315
FP(S1)	0.354	0.489	0.254	0.47	0.462	0.524	0.725	0.458	0.356	0.216	0.46	0.001	0.451	0.307	0.878
FP(S1)	0.354	0.489	0.254	0.47	0.462	0.524	0.725	0.458	0.356	0.216	0.46	0.001	0.451	0.307	0.878
FP(S2)	0.401	0.399	0.298	0.527	0.445	0.489	0.711	0.424	0.462	0.405	0.396	0.041	0.366	0.374	0.893
FP(S2)	0.401	0.399	0.298	0.527	0.445	0.489	0.711	0.424	0.462	0.405	0.396	0.041	0.366	0.374	0.893
FP(S3)	0.394	0.423	0.358	0.549	0.444	0.493	0.72	0.399	0.421	0.355	0.437	0.102	0.384	0.312	0.855
FP(S3)	0.394	0.423	0.358	0.549	0.444	0.493	0.72	0.399	0.421	0.355	0.437	0.102	0.384	0.312	0.855
FP(S4)	0.567	0.63	0.428	0.429	0.551	0.651	0.688	0.528	0.598	0.4	0.443	-0.047	0.447	0.524	0.806
FP(S4)	0.567	0.63	0.428	0.429	0.551	0.651	0.688	0.528	0.598	0.4	0.443	-0.047	0.447	0.524	0.806
FWB(AB1)	0.774	0.449	0.477	0.296	0.293	0.432	0.413	0.341	0.705	0.392	0.278	0.001	0.31	0.54	0.408
FWB(AB1)	0.774	0.449	0.477	0.296	0.293	0.432	0.413	0.341	0.705	0.392	0.278	0.001	0.31	0.54	0.408
FWB(AB2)	0.915	0.515	0.5	0.42	0.4	0.522	0.474	0.408	0.805	0.468	0.248	0.126	0.305	0.554	0.48
FWB(AB2)	0.915	0.515	0.5	0.42	0.4	0.522	0.474	0.408	0.805	0.468	0.248	0.126	0.305	0.554	0.48

Items	AB	FA	FB	FBG	FK	FL	FP	FS	FWB	H	IP	NUMD	RP	SSM	S
FWB(AB3)	0.911	0.479	0.503	0.383	0.401	0.509	0.439	0.389	0.798	0.422	0.202	0.121	0.264	0.58	0.483
FWB(AB3)	0.911	0.479	0.503	0.383	0.401	0.509	0.439	0.389	0.798	0.422	0.202	0.121	0.264	0.58	0.483
FWB(AB4)	0.918	0.513	0.511	0.368	0.479	0.555	0.435	0.399	0.811	0.461	0.272	0.115	0.264	0.573	0.426
FWB(AB4)	0.918	0.513	0.511	0.368	0.479	0.555	0.435	0.399	0.811	0.461	0.272	0.115	0.264	0.573	0.426
FWB(AB5)	0.792	0.345	0.402	0.369	0.362	0.388	0.355	0.234	0.67	0.435	0.172	0.211	0.192	0.38	0.344
FWB(AB5)	0.792	0.345	0.402	0.369	0.362	0.388	0.355	0.234	0.67	0.435	0.172	0.211	0.192	0.38	0.344
FWB(H1)	0.402	0.338	0.404	0.356	0.241	0.355	0.266	0.298	0.659	0.885	0.105	0.081	0.071	0.513	0.245
FWB(H2)	0.437	0.405	0.452	0.428	0.269	0.408	0.368	0.347	0.706	0.931	0.198	0.13	0.18	0.554	0.31
FWB(H2)	0.437	0.405	0.452	0.428	0.269	0.408	0.368	0.347	0.706	0.931	0.198	0.13	0.18	0.554	0.31
FWB(H3)	0.505	0.409	0.436	0.472	0.434	0.52	0.508	0.468	0.764	0.864	0.312	0.065	0.281	0.674	0.496
FWB(H3)	0.505	0.409	0.436	0.472	0.434	0.52	0.508	0.468	0.764	0.864	0.312	0.065	0.281	0.674	0.496
FWB(SSM1)	0.586	0.548	0.538	0.386	0.453	0.574	0.402	0.445	0.821	0.642	0.214	0.069	0.193	0.916	0.42
FWB(SSM1)	0.586	0.548	0.538	0.386	0.453	0.574	0.402	0.445	0.821	0.642	0.214	0.069	0.193	0.916	0.42
FWB(SSM2)	0.506	0.537	0.447	0.373	0.421	0.532	0.434	0.421	0.772	0.623	0.289	0.085	0.276	0.909	0.403
FWB(SSM2)	0.506	0.537	0.447	0.373	0.421	0.532	0.434	0.421	0.772	0.623	0.289	0.085	0.276	0.909	0.403
FWB(SSM3)	0.576	0.545	0.48	0.302	0.452	0.546	0.393	0.393	0.774	0.52	0.285	0.02	0.245	0.908	0.378
FWB(SSM3)	0.576	0.545	0.48	0.302	0.452	0.546	0.393	0.393	0.774	0.52	0.285	0.02	0.245	0.908	0.378
NUMDP1	0.149	0.016	0.021	0.228	0.138	0.091	0.165	0.095	0.161	0.129	0.09	0.881	0.226	0.127	0.016
NUMDP2	0.161	0.059	0.054	0.254	0.235	0.143	0.241	0.077	0.142	0.095	0.204	0.932	0.287	0.087	0.067
NUMDP3	0.123	0.035	0.037	0.211	0.152	0.073	0.199	0.003	0.101	0.063	0.168	0.953	0.277	0.055	0.032
NUMDP4	0.066	0.015	0.013	0.222	0.14	0.031	0.16	0.061	0.067	0.094	0.117	0.909	0.213	0.014	-0.002
NUMDP5	0.064	0.018	0.007	0.221	0.106	0.009	0.153	0.074	0.044	0.084	0.12	0.88	0.195	-0.039	-0.009

*Notes:* Ability to meet needs (AB); Financial Attitude (FA); Financial Behavior (FB); Financial Budgeting (FBG); Financial Knowledge (FK); Financial Skills (FS); Happiness (H); Investment Planning (IP); Number of dependents (NUMD); Retirement planning (RP); Safe and sound mind (SSM); Savings (S).

Source: Field Survey (2022)

## APPENDIX C

## ETHICAL CLEARANCE

## UNIVERSITY OF CAPE COAST

## INSTITUTIONAL REVIEW BOARD SECRETARIAT

TEL: 0558093143 / 0508878309  
E-MAIL: [irb@ucc.edu.gh](mailto:irb@ucc.edu.gh)  
OUR REF: UCC/IRB/A/2016/1494  
YOUR REF:  
OMB NO: 0990-0279  
IORG #: IORG0009096

16<sup>TH</sup> AUGUST, 2022

Mr. Emmanuel Assifuah-Nunoo  
Department of Finance  
University of Cape Coast

Dear Mr. Assifuah-Nunoo,

**ETHICAL CLEARANCE – ID (UCCIRB/CHLS/2022/23)**

The University of Cape Coast Institutional Review Board (UCCIRB) has granted Provisional Approval for the implementation of your research **Financial Literacy and Financial Planning: Innuendo for Financial Well-Being of Informal Sector Workers in Ghana**. This approval is valid from 16<sup>th</sup> August, 2022 to 15<sup>th</sup> August, 2023. You may apply for a renewal subject to submission of all the required documents that will be prescribed by the UCCIRB.

Please note that any modification to the project must be submitted to the UCCIRB for review and approval before its implementation. You are required to submit periodic review of the protocol to the Board and a final full review to the UCCIRB on completion of the research. The UCCIRB may observe or cause to be observed procedures and records of the research during and after implementation.

You are also required to report all serious adverse events related to this study to the UCCIRB within seven days verbally and fourteen days in writing.

Always quote the protocol identification number in all future correspondence with us in relation to this protocol.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'Samuel Asiedu Owusu'.

Samuel Asiedu Owusu, PhD  
**UCCIRB Administrator**

ADMINISTRATOR  
INSTITUTIONAL REVIEW BOARD  
UNIVERSITY OF CAPE COAST