

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI,
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KNUST

**Exploring the Savings and Investment Knowledge and Habits of Formal and Informal
Sector Workers in Ghana: Evidence from Asuogyaman District**

By

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DECLARATION

I hereby declare that this submission is my own work towards the award of the MSc. Accounting and Finance and that, to the best of my knowledge, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma at the University, except where due acknowledgment has been made in the text.

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DEDICATION

This thesis is dedicated to my beloved wife and children. I also dedicate this work to my dear Mum and Dad, Mr. Ebenezer Osei-Tuagyan, my Boss and work colleagues, and to all my loved ones and friends. May Jehovah bless you all.

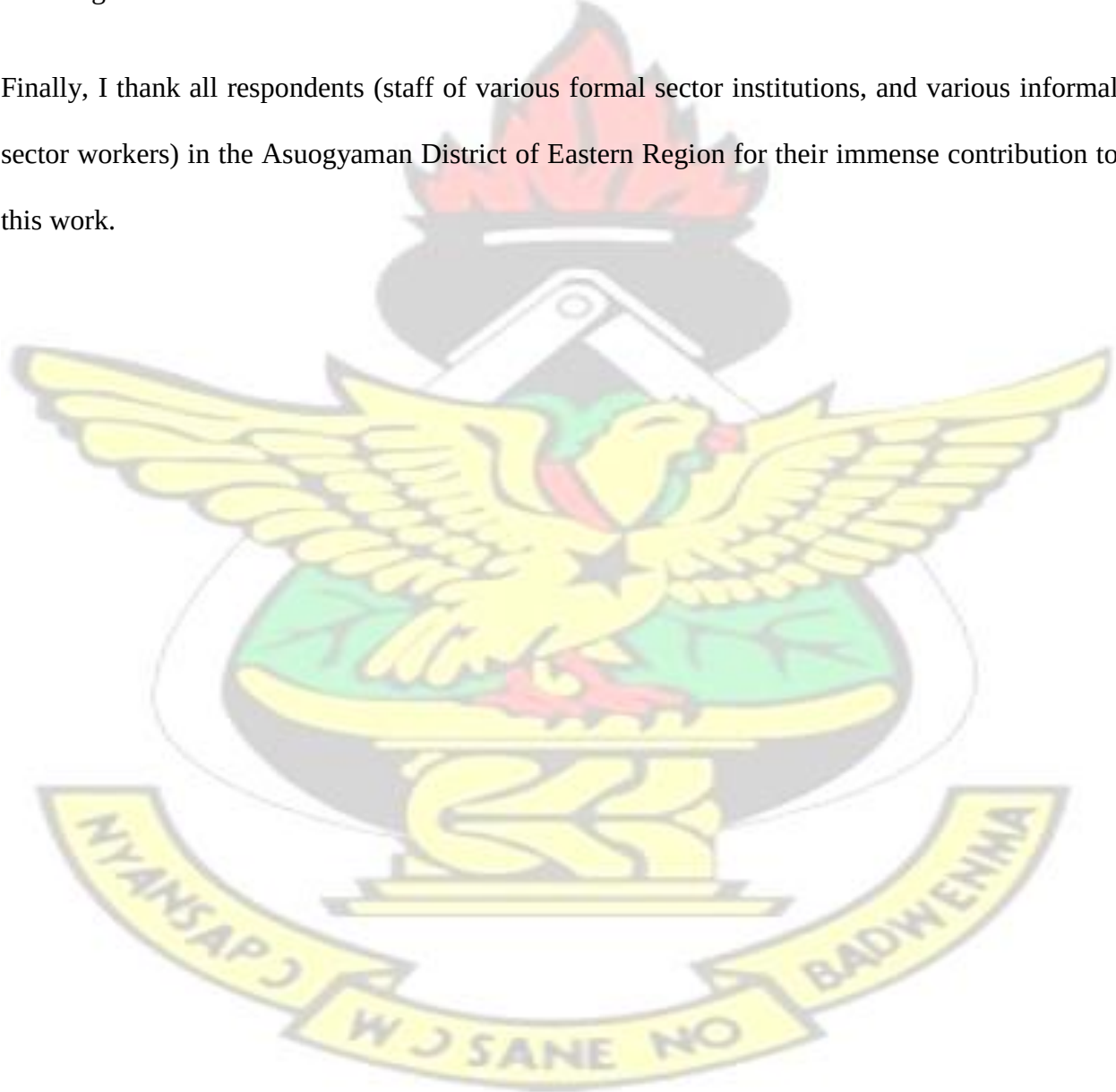


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ABSTRACT

The study sought to investigate the savings and investment knowledge and habits of formal and informal sector workers with particular focus on workers in the Asuogyaman District. To achieve the set objectives, the study employed the quantitative approach based on the descriptive survey design and obtained primary data from a sample size of 200 workers. The dataset was analyzed using both descriptive analysis (frequency, percentages, and means) and inferential analysis (chi square test). The study established that formal and informal sector workers possess medium and low levels of knowledge respectively on both savings and investment. It was also discovered that workers prefer low risk investment assets namely treasury bills and secured deposits to other high-risk marketable securities. It was again found that workers are predominantly motivated to invest in order to buy real assets, to grow wealth and to safeguard financial independence on retirement. The study established that there is no significant association between the sector of worker and amount of money saved from disposable income but a significant association is found between the sector of worker and the preference for financial investment assets. A conclusion is made that although sector do not influence the level of savings by workers, it has influence on preference for financial asset which may be due to the disparity in the level of knowledge possessed by workers belonging to the two extremes on savings and investment. Hence, relevant stakeholders (such as banks, financial institutions, local and national trade associations, etc.) must develop strategies to boost the financial knowledge of workers, especially those in the informal sector, to help boost their knowledge on savings and investment which would help to increase their interest in savings and investment, thus, enhancing capital accumulation for deficit units in the economy.

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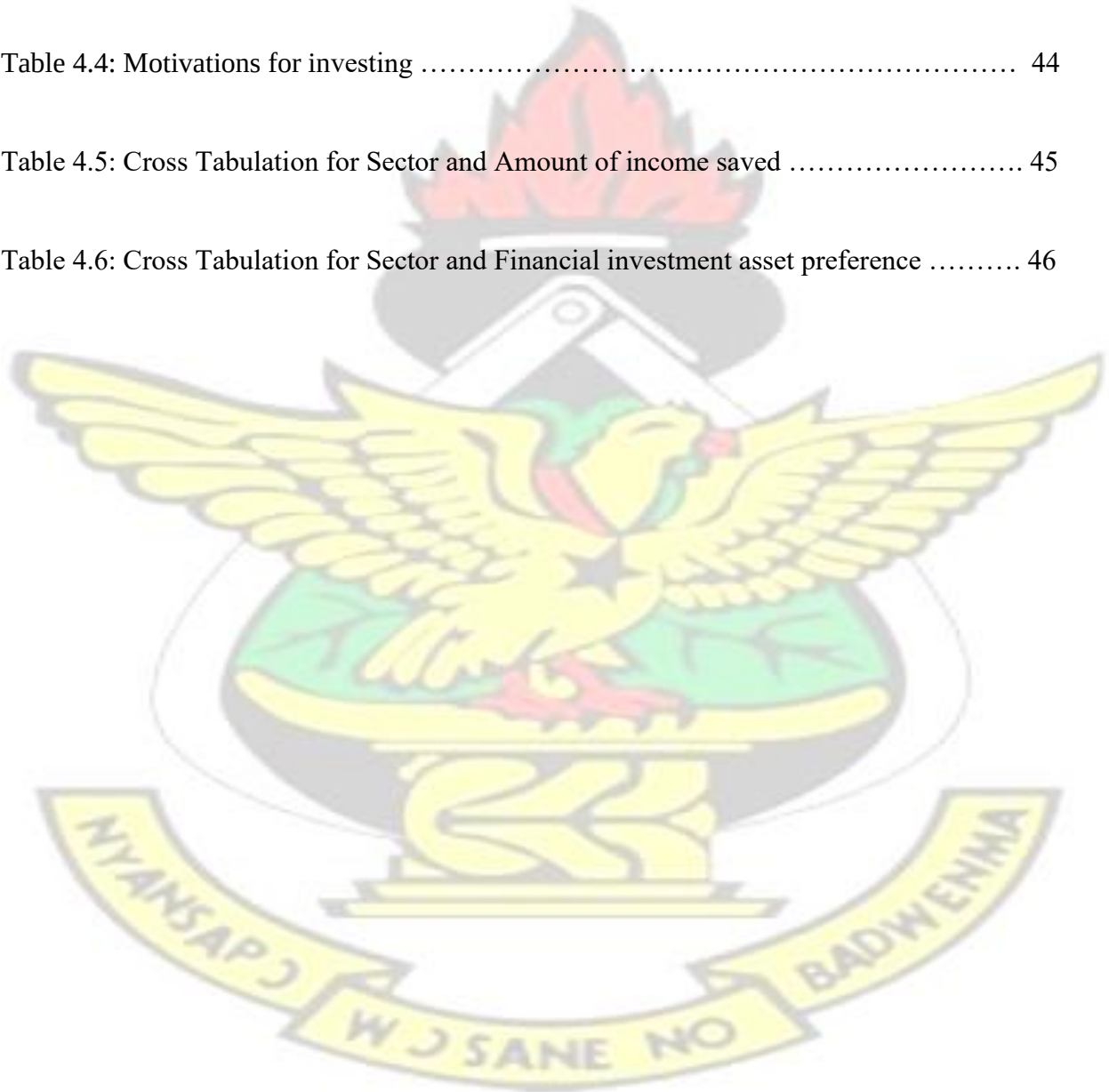
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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Economic growth is very significant in affecting the quality of life of people in a country (Anju and Anuradha, 2017). To achieve economic growth, savings and investment are seen as indispensable factors. Priyanka and Tripathi (2019) indicates that with proper savings and investment strategies coupled with good financial planning, investors can greatly increase personal wealth which plays a major contributory role to enhanced economic growth. This means that savings and investment by individuals are important both for personal financial well-being and for economic growth.

Although savings and investment are used interchangeably in most instances, there is a clear difference between them. Basically, saving refers to setting aside money to cater for future use and it is mostly characterized by quick accessibility and little or no risk. Indeed, domestic savings which is the totality of savings in an economy consist of three parts namely household savings, corporate savings, and public savings (Syed, H., Nigar, S. and Ullah, S., 2017). Of these, household savings which is the difference between individual workers disposable income and consumption expenditure constitute the major portion of gross domestic savings (OECD, 2016; Syed, Nigar, and Ullah, 2017). With regards to investment, it involves buying assets with the anticipation that the assets will generate money for you. This asset can be in the form of stocks, bonds, real estate, among others.

Technically, savings serve as the channels for investments which consequently becomes the gross domestic capital formation of an economy. Available records show that in Ghana, the percentage of gross fixed capital formation to GDP increased by 4% to 17% 2012 from the prior year (2011) figure of 13% and subsequently increased by 9.5% in 2013, 3% in 2014, and a marginal increase of 0.6% in 2015. Although there was a slight decrease by 2% in 2016 from the prior year (2015) figure of 30%, the years subsequent to 2016 suffered a sharp decline by 7% in 2017 and a further decrease by 6% in 2018 (World Development Indicators, 2020).

The significance of the contribution individual savings and investments give to the economy makes savings and investment behaviour of individual investors very crucial since it can make or unmake the economy. Saving and investment behaviour is basically a blend of financial and psychological principles to explain how investors behave towards the dynamics in the financial market. Mak and Ip (2017) emphasized that in recent times individuals are becoming more cautious towards financial investment following the several financial crises across the globe. A situation which if unresolved by rejuvenating investor confidence has a higher tendency to affect economic development since gross capital formation will be adversely affected.

In Ghana, the entire economy has seen some turbulence over the few years from 2017 to now due to the banking crisis between 2017 and 2019 and the unimaginable effect of the global COVID-19 pandemic on businesses and individuals which continue to be an issue of concern to both national and international stakeholders. Although arguably, the sharp decline in the gross fixed capital formation in Ghana from 2017 provides evidence that the economic turbulence which is triggered

by the banking crisis and the global COVID-19 pandemic has greatly affected individual savings and investments which is seen as very important for economic development.

It is important to note that, financial conditions are dynamic, hence, workers in the formal and informal sectors may be affected differently which may also translate into difference their savings and investment behaviour. Nonetheless, the investment behaviour of formal and informal workers have not received much attention. Extant literature on studies conducted in Ghana on savings and/or investment behaviour such as studies conducted by Amu, Offei-Ansah, and Gavor (2012) and Komla (2012) focus on investment behaviour of rural families and demographic determinants of rural saving and investment respectively. Other studies such as Krah, Aveh, and Addo (2014) and Donkor and Anane (2016) study on financial management practices among households and saving behaviour of citrus farmers respectively. The above discussion provides a glaring picture of the scantiness of research in respect of savings and investment behaviour of formal and informal sector workers in Ghana. It is based on this background that the present study aims to explore the savings and investment knowledge and habits of formal and informal sector workers in Ghana with particular focus on workers in the Asuogyaman District.

1.2 PROBLEM STATEMENT

Individual saving and investment help in improving the quality of life of the individual investors as well as economic growth by bringing together surplus funds which enable deficit units have access to capital to undertake projects to boost the general economy (OECD, 2016; Priyanka and Tripathi, 2019; Dobson, Ramlogan-Dobson, and Strobl, 2020). In spite of the significance of saving and investment to economic growth of a country, individual investor behaviour is very

important in determining the extent to which saving and investment affect economic growth (Adigamova and Orlova, 2015). In Ghana, the decrease in gross domestic savings as a percentage of GDP by 3% in 2017 from the prior year figure resulted in a sharp decline in the gross capital formation by 7% in 2017 from the prior year figure. Such deteriorating situation has persisted during the last few years from 2017 without any progress according to available figures (World Development Indicators, 2020). This provides evidence that the economic crisis exacerbated by the banking crisis coupled with the COVID-19 pandemic has affected the behaviour of individuals towards saving and investment. But regarding individual investor behaviour, the question that remains unanswered is ‘do workers in the formal and informal sectors have the same saving and investment behaviour or otherwise given that they may be affected differently under conditions of financial uncertainties?’ Nonetheless, extant literature on studies conducted in Ghana on savings and/or investment behaviour have not paid attention to this area. For instance, studies conducted by Amu, Offei-Ansah, and Gavor (2012) and Komla (2012) focus on investment behaviour of rural families and demographic determinants of rural saving and investment respectively. Other studies such as Krah, Aveh, and Addo (2014) and Donkor and Anane (2016) study on financial management practices among households and saving behaviour of citrus farmers respectively. The literature evidence shows that there is paucity of research which delve into the savings and investment knowledge and habits of formal and informal sector workers in Ghana in a single study. Therefore, this study seeks to fulfil this gap in research.

1.3 OBJECTIVES OF THE STUDY

This study generally seeks to investigate the savings and investment knowledge and habits of formal and informal sector workers in Ghana focusing on the Asuogyaman District. The specific objectives defined to guide the study are as follows.

1. To ascertain the knowledge on savings and investment among formal and informal sector workers.
2. To identify the preference and motivation for investment among formal and informal sector workers.
3. To ascertain if the sector in which workers are engaged has an association with the amount of money saved from disposable income.
4. To ascertain if the sector in which workers are engaged has an association with preference of financial investment products/assets.

1.4 RESEARCH QUESTIONS

Given the objectives defined above, research questions were defined as follows.

1. What is the level of knowledge on savings and investment among formal and informal sector workers?
2. What is preference and motivation for investment among formal and informal sector workers?
3. Is there an association between sector of worker and amount of income saved?
4. Is there an association between sector of worker and preference for financial investment asset(s)?

To effectively achieve the third and fourth objectives, the following research hypothesis were defined based on the objectives and their related questions.

Objective three hypothesis:

H₀: There is no association between sector of worker and amount of income saved.

H₁: There is an association between sector of worker and amount of income saved.

Objective four hypothesis:

H₀: There is no association between sector of worker and financial investment asset preference.

H₁: There is an association between sector of worker and financial investment asset preference.

1.5 SIGNIFICANCE OF THE STUDY

The findings of the study will be beneficial to a couple of institutions and individuals. These are grouped into four different strands as follows: policy makers and regulators, management of financial institutions, individual investors, and the academia.

For policy makers and regulators, it is hoped that the findings of the study will provide insight into the investment behaviour of both formal and informal sector workers which will help policy makers to put in place the right policies to enable the economy withstand different financial situations.

For management of financial institutions, it is hoped that the findings of the study will help to highlight the investment preferences of individual workers so as to devise strategies and products to meet their preferences. It will also provide insight for financial institutions on ways to revive confidence of individual investors irrespective of the uncertainties in the financial landscape.

For the individual investor, the study will help them to identify how other investor diversify their investment and cope with dynamic financial environment. The study will also add to the existing pool of literature on savings and investment behaviour to serve as a source of reference to researchers in the future.

1.6 SCOPE AND LIMITATIONS OF THE STUDY

Contextually, the study was restricted to the areas of investigation as addressed by the research objectives which involved investigating the savings and investment behaviour of formal and informal sector workers in Ghana and the knowledge of investment products available. With regards to the geographic scope, the study was limited to formal and informal sector workers in the Asuogyaman District in the Eastern Region of Ghana.

Major limitation encountered in the course of the study is obtaining data from people who could not comprehend the technicalities in the questionnaire since some areas were relatively technical financial areas which require some level of knowledge in finance. To surmount this challenge, the researcher engaged two enumerators who explained the issues and administered the questionnaire to people who did not have the technical capacity to understand the questions. This eliminated the challenge encountered and ensured smooth data collection for the study.

1.7 ORGANIZATION OF THE STUDY

The study is organized into five chapters. The first chapter introduces the main component of the research. This includes background of the study, problem statement, aims and objectives of the research, research questions, scope, summary of research methodology, significance, and structure of the study. Chapter two of the work covers the review of literature on the study topic. The major composition of this chapter are the conceptual literature review, the theoretical literature review, and the empirical literature review. Chapter three considers the methodological approach which is adopted for the study. It gives specific details of how the study was conducted. These include the research design, population, sample and sampling procedure, as well as data collection and organization procedures. Chapter four presents the results and discussions. Chapter five summarizes the main findings, conclusion and recommendations for policy adoption and further studies.



CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

This is the chapter two of the thesis and it contain the review of literature on the study. The chapter mainly encompass three sections. The first section deals with the review of conceptual literature which focuses on providing meaning and overview of the key themes of the study. The second section also review theoretical literature which mainly look at a discussion of some of the theories relevant to support the purpose of the study. The third section is the empirical review aspect which presents discussion on some empirical outcome of prior studies related to the current study.

2.1 CONCEPTUAL REVIEW

2.1.1 Understanding the Concept of Saving

Saving is very old and popular concept in the field of finance and economics. It basically refers to the portion of income that is not spent on immediate consumption (Issahaku, 2011). Some classical economists such as Keynes simply put it as the leftover of income minus consumption. More often than not, people use the term savings and investment interchangeably to refer to the same thing. However, the two concepts mean different things. As indicated above, savings is the excess portion of disposable income after deducting consumption expenditure, therefore, it forms the basis for investment (Syed, Nigar, and Ullah, 2017). Issahaku (2011) observe that even though they mean different things, there is a thin line between the two and both can be said to be intertwined. It is

important to note that savings are usually made to provide a more liquid form of fund to cater for emergencies in the future. Thus, in effect, one can conclude that savings provide a mechanism for ensuring that unexpected events do not become huge financial burdens due to unavailability of immediate funds.

Savings can be made in different forms. According to Aryeetey (2004) savings can be made in the form of physical commodity (like livestock, stored harvest, etc) or cash. He further explains that savings in the form of cash represents a more liquid form of savings than savings in the form physical commodity. It is worthy of note that for the purpose of this study, savings is view from the perspective of cash savings.

2.1.2 Types of Individual Savings

Various schools of thought provide that two principal types of savings in extant literature. Some authors such as Aryeetey (2004) and Quartey and Blankson (2008) advance that individual savings which in other words is collectively classified as household savings can be formal or informal depending on the financial institution involved in the entire saving activity. With regards to the formal type of savings, it relates to savings done with formal financial institutions legally registered and licensed by the Bank of Ghana (BOG) to provide financial services either as a bank or a non-bank financial service institution. The informal type of saving on the other hand refers to savings done outside the scope of the formal institutions sanctioned by the BOG. Mostly, this type of savings involves the susu collectors, rotating savings, credit associations, and savings and credit clubs run by an operator.

2.1.3 Understanding the Concept of Investment

The concept of investment basically refers to deferment of current consumption and putting the funds into purchasing an asset, giving a loan, or keeping funds in a financial institution, all with the intent of getting future returns. It differs from savings because investment specifically involves committing funds into an asset, either real or financial asset for the purpose of generating income in the form of interest income, premium, dividend, profit, or capital appreciation (Chandra, 2017). Reilly and Brown (2011) explain the concept of investment as the current commitment of dollars for a period of time in order to derive future payments that will compensate the investor for: the time the funds are committed, the expected rate of inflation, and the uncertainty of the future payments. The investor in this case can be an individual, government, pension fund, or corporate entity (Kaptan, 2001).

Singh (2012) indicates that investment is considered differently from economic and financial perspectives. From the financial viewpoint, investment refers to the allocation of monetary resources ranging from risk-free to risky investments and with the expectation of a good return that varies with risk (Stoughton, Wu, and Zechner, 2011; Singh, 2012). Given that risk is an indispensable element of financial investment, the investor has to aim at a trade-off between risk and return. Thus, in effect, the financial experts regard investment as the transfer of financial resources from one person to another. In contrast with the financial viewpoint, the economist refers to investment as net additions to the economy's capital stock which consists of goods and services that are used in the production of other goods and services (Singh, 2012; Rauf, 2014). Thus, from the economic perspective, investment goes beyond transfer of financial resources from person to person to encompass the creation of new and productive capital. These new and productive capital

mostly come in the form of new construction, new production of durable equipment (e.g. plant and equipment), as well as development of inventories and human capital, among others.

Litterman (2004) and Avadhani (2010) argue that the meaning of investment from the financial and economic angles cannot be separated because of its inclination to the two different streams of experts. They both argue that investment is basically a part of individual's savings which moves directly or indirectly into the capital market as new or secondhand capital financing. Hence, investors in their position as suppliers of funds and investors in their position as users of funds find a meeting place in the capital market. However, for the purpose of this study, investment is viewed from its financial sense rather than the economic sense.

2.1.4 The Channels of Investment

There are several channels of investment. Murithi, Narayanan, and Arivazhagan (2012) observe that a channel or avenue of investment can be classified as based on risk. By risk it refers to an investment channel either being risky or risk free. The authors indicate that a risk-free investment channel refer to investment channel devoid of risk and this mostly relates to government securities. As the name connotes, a risky investment refers to investment channel with a given level of inherent risk. This includes all other investments avenue with the exception of government securities such as government treasury bills, bonds, and others.

Singh (2012) and Syed, Nigar, and Ullah (2017) also advance that an investment channel can be direct or indirect. According to Singh (2012) direct investment channels are the various investment avenues or product where the investor has full control over his choice of decisions relating to the

investment. This means that the investor has a direct influence on decision choices regarding the investment product. For example, corporate bonds, equity shares, etc. On the other hand, the indirect investment channel relates to investment where the investor does not have any direct control over decision on the subject of the investment (Syed, Nigar, and Ullah (2017). Over here, decisions on investment are made on behalf of the investor by an entity which manages the investment on behalf of the investor. For example, pension fund, mutual fund, life insurance covers, and many more.

It is important to note that the underlining objective of an investor's decision to undertake a particular investment is to ensure that the investment achieve the best balance of risk and return (Sarkar and Sahu, 2018). Therefore, an investor's use of one investment channel or the other depends on which the investor expect to maximize his utility. Therefore, to achieve a sound investment programmes, an investor needs to familiarize him/herself with the various alternatives investment channels to ascertain which of them maximizes his utility.

2.1.6 Understanding Savings and Investment Behaviour and Underlying Determinants

The term investment behaviour emerged from behavioural finance which tries to blend concepts the field of finance and psychology to explain how people act with regards to financial decisions under certain situations. Essentially, investment behaviour attempts to recognize the what, why, and how investment move from the human perspective (Ricciardi and Simon, 2000). According to Baker and Ricciardi (2014) investment behaviour tries to explain the integration of the disciplines of psychology and finance based on individual's past and present belief and actions vis-à-vis the financial market. This involves a mental process and emotional issues that investors face during

financial planning and investment. This may be based on past events, beliefs, hearsays among others. Ricciardi and Simon (2000) observe that investment behaviour is intertwined with psychological and social factors which affect the decision-making process with regards to issues of investment.

The investment behaviour of individual is influenced by multiplicity of factors. Onwioduokit (2002) notes that two main factors serve as the push factors influence the investment behaviour of people. These two primary factors are given as macroeconomic environment (i.e. government policies on trade, monetary control, fiscal and exchange rates and institutional factors (i.e. administrative, legislative and regulatory framework). Mak and Ip (2014) also advance that among the major factors which influence the investment behaviour of individual investors are demographic, psychological and socioeconomic factors.

Olsen and Lund (2011) also point out that the major factor which influence the investment behaviour of people is the investment climate. By investment climate the authors refer to the economic and political landscape within which investments are made. This means that the behaviour of individual investors differ depending on the stability of the economic or political environment.

Another significant factor which influences the investment behaviour of investors is risk. Frank and Edgar (2006) note that risk continues to be an underlying factor in determining the investment decisions of every investor. They explain that risk is the intrinsic factor of investment and it determines the probability of achieving the investors investment objective which is the returns.

But it is worthy of note that the risk of an investment can be systematic or asset- specific. Given that the systematic risk affects the totality of the economic or the financial system, it can then be said that the systematic risk elements are same as the elements within the investment climate which affect savings and investment habits of individuals (Olsen and Lund, 2011).

Another school of thought maintain that investors investment behaviour is influenced by the type of investor (Baker and Nofsinger, 2010). They group investors into aggressive investor, the long-term investor, and the income investor. In their view, the aggressive investors have immediate and large gain as their primary objective which make them less risk averse compared to the long-term and income investors whose objective is to obtain regular long-term income who tend to be more risk averse.

2.1.7 Understanding the Formal and Informal Sector Working Class

The formal sector basically refers to that part of the economy which is well structured, very organized, standardized, and conforms to legal regulatory requirements. According to Arimah (2001) the formal sector of the economy is characterized by subjection to regulation, wages are paid on a regular basis, taxes are levied and explicit contracts between employers and workers exist. With regards to employment, Pradhan and Van Soest (1995) indicate that the formal sector has an organized structure of employment which has clearly written rule of engagement, agreement, and responsibilities related to the job. Ordinarily, the formal sector employees work for fixed number of hours. Technically, the formal sector comprises of people who work in government and public sector institutions, multinational and national private companies, and all other institution formally registered with national regulatory bodies with well-established laid

down policies and structures. In Ghana, some examples of formal sector employees include workers in public and private educational institutions, public and private health institutions, public and private corporate bodies, workers in MDAs, MMDAs, among others.

At variance with the formal sector, an informal sector of the economy encompasses economic activities which are not well structured, standardized, and strictly regulated. According to Abeberese and Chaurey (2017) the informal relates to all economic activities which are not registered with any government entity or regulatory body, thus, not subject to stringent laid down procedures in the form regulatory oversight. It is important to observe that the unregulated nature of the informal sector does not make the pursuit of economic activities illegal. Rather, the concept takes its meaning from the non-formalized and unstructured nature of business activities. In developing and transition countries, informal sector activities form the substantial part of the general economic activities. In Ghana for instance, the informal sector employs over 80 percent of the total workforce of which about 56 percent are self-employed and 20 percent work in family enterprises (Koto, 2015). According to Tettey (2019), the informal sector essentially possesses characteristics which include lack of official protection and recognition, self-employment dominated, no adherence to minimum wage legislations, predominantly small-scale operation with individual or family ownership, and keeping of little or no formal books of accounts, among others. More often than not, employment in the informal sector is not structured with clear written rules of employment.

2.2 THEORETICAL REVIREW

2.2.1 The Rational Expectation Theory

Although the rational expectation theory was first proposed by John F. Muth in the early part of 1960s, the theory became popular and very common an academic circles after the work of Robert E Lucas Jr. in the 1970s. Muth originally used the term to explain the lots of economic conditions in which affect partly affect the future expectation of people. The theory posits that individuals base their decisions on three primary factors: their human rationality, the information available to them, and their past experiences.

Investors as rational humans base their decisions to invest on a broad range of factors which include the past experience and current general economic and investment climate (Gennaioli, Ma and Sheifer, 2016). This means that the rational expectation theory aptly explains how individual investors will behave under conditions of uncertainty. Thus, effectively, there is a close knit between this theory and investors' investment behaviour vis-à-vis their future expectations.

2.2.2 The Prospect Theory

The prospect theory, also referred to as the loss-aversion theory, or the psychological theory of decision making under conditions of risk emerged in 1979 and was further developed to become popular in academic and finance circles in 1992 by Amos Tversky and Daniel Kahneman. Originally, the theory borrows some assumptions from the behavioural economics theory which explains how individuals make a choice between probabilistic alternatives where risk is involved and the probability of different outcomes is unknown. The theory indicates that indeed losses and

gains are valued differently, and thus, individuals make decisions based on perceived gains instead of perceived losses. Thus, in effect, if two choices are put before an individual, both equal, with one presented in terms of potential gains and the other in terms of possible losses, the former option will be chosen. This means that all things being equal, an investor's decision on whether or not to invest in a product or asset largely depends on the perceived gains that the product offers. The theory technically alludes that under conditions of uncertainty where investor's perceived losses outweigh his perceived gains due to economic turmoil, the investor naturally becomes risk averse which significantly influences his/her decisions towards saving and investment.

2.3 EMPIRICAL REVIEW

2.3.1 Knowledge on Savings and Investment

A study pursued by Mireku (2015) on financial literacy among university students in Ghana revealed that respondents possess a medium level of knowledge on savings and borrowing. In agreement with the study done by Mireku (2015), a study by Mabula and Dongping (2019) reported medium savings knowledge among study participants, although their work focused on SME managers unlike the study by Mireku which used University Students. In sharp contrast with the findings of the studies above, studies done by Millar and Devonish (2009) and Suppakitjarak and Krishnamra (2015) in Barbados and Thailand respectively, documented a low level of knowledge among workers on savings.

Further, Mireku (2015) reported in his study on university students that respondents possess low knowledge on investment products, risks, and diversification. A study by Zuraina (2018) also reported a similar outcome where indication was given that respondents possessed low literacy on

investment matters. Similar to these outcomes, results of studies conducted by Van Rooij et al. (2011) and Volpe et al. (1996) also reported low level of knowledge among the study participants.

In a study pursued by Samudra and Burghate (2012) which investigated the investment and savings behavior in respect of the middle-class households in Nagpur in India, it emerged that bank deposit was the popular savings and investment tool known by significant number of people. The study further found insurance as another common investment option which most investors are familiar with. In corroborating the outcome of the study above, another study by Chaturvedi and Khare (2012) focused on investigating the investment pattern and awareness of investors in India. They concluded that respondent's knowledge and awareness of the traditional investment avenues such bank deposits far outweigh the knowledge and awareness in the area of corporate securities, mutual funds, and equity and preference shares. Their study further concluded that occupation, level of education, and income significantly influence an individual's awareness of the different investment options.

In their study, Nga et al. (2010) conducted a study on the level of awareness of general financial matters and financial investment products among young in higher educational institutes in Malaysia based on demographic influences. They concluded in their study that males have higher level of awareness in financial matters and investment products compared to their female counterparts. The study also concluded that indeed an individual course of study significantly has a bearing on the knowledge and awareness of financial matters and investment products.

Further on knowledge of individual workers on investment product, Geetha and Ramesh (2011) studied the Indian worker's behaviour about investment preferences. The authors concluded that people's awareness of all the investment products available to them on the market was extremely inadequate. The authors emphasized that majority of study participants lacked knowledge about the existence of financial investment securities.

2.3.2 Preference and Motivation for Investment

A study conducted in Ethiopia by Assefa and Rao (2018) which revealed that workers significantly prefer to invest in traditional and safe financial products like government bonds rather than comparatively more risky assets which offer higher return. The result of a study conducted by Suppakitjarak and Krishnamra (2015) synchronizes with the finding of Assefa and Rao above. Similarly, Suppakitjarak and Krishnamra (2015) reported in their study that people prefer to invest in financial assets like the secured deposit which is seen as less risky compared to other marketable securities.

In another study conducted by Hunjra (2019) in Pakistan, the author reported that salaried workers have higher preference for less risk assets although they do not offer higher returns. However, unlike the studies by Assefa and Rao (2018) and Suppakitjarak and Krishnamra (2015) which revealed respondents have higher preference for less risk financial assets, Hunjra reported that workers predominantly prefer to invest in real estate assets compared to marketable financial assets.

Regarding the motivation for investment, a study done by Addai, Gyimah, and Owusu (2017) among informal fisher folks in Ghana, the authors reported that the most paramount factor that motivates people to invest is to enable them provide for their children's need. The authors concluded that although several people engage in fishing activities prioritize their investment towards providing children's needs such as education and other basic needs far more than other factors.

At variance with the outcome report by Addai, Gyimah, and Owusu (2017), study by Swasdpeera and Pandey (2012) in Thailand revealed that the most dominant factor that pushes people to invest is financial security at old age. The authors concluded that people give paramount consideration to living a financially independent life at old age, hence they invest to achieve that during their working life. Similar to this finding, another study pursued in Thailand by Suppakitjarak and Krishnamra (2015) discovered that retirement security is foremost objective which motivate people to invest.

2.3.3 Association between Sector and Savings Levels/Financial Asset Preference

A couple of studies have revealed varied outcome on the influence of formal or informal sector on people's investment behaviour. Cilasun (2009) pursued a study which investigated income, consumption and saving of formal and informal Turkish households using 2002-2006 Household Budget Survey. It emerged from the study that the sector in which the key members of the household belong plays major role in the proportion of income saved over a period due to disparity in earnings between the formal and informal sectors. In consistent with the above outcome, another study conducted in Botswana by Matenge, Makgosa, and Mburu (2019) revealed that although demographic factors influence the savings levels, the sector of the employee plays a

significant role since workers' earnings vary from different sectors. In contrast with the findings of the studies above, Geetha and Ramesh (2011) pursued a study in India which reported no significant association between the proportion of disposable income saved and among formal and informal sector workers.

Regarding employees' sector and preference for financial investment assets, study by Assefa and Rao (2018) revealed strong association between workers sector of engagement and preference for financial investment products since formal sectors workers are mostly knowledgeable on financial matters due to their high level of education. A study by Parihar and Sharma (2012) revealed consistent outcome with the above finding by reporting that strong relationship exists between an individual's sector of engagement and investment options.

Unlike the findings from the above studies, research by Shanmugasundaram and Balakrishnan (2011) established that people's sector of employment does not necessarily influence their choice of financial assets on the capital market which is in tandem with the result of a study by Horvarth and Zuckerman (1993) which reported weak association between individual's sector of employment and investment preference. The authors concluded that employment in the formal and informal sector has weak influence on preferred investment by people.

2.4 CONCEPTUAL FRAMEWORK

The conceptual framework developed below shows the relationships of the major variables of the study. From the model in figure 2.1 below, savings and investment behaviour is denoted with amount of income saved out of disposable income (income saved) and financial asset preferred), which are influenced by the person's sector of employment (formal or informal sector), with knowledge on savings and investment playing a key role.

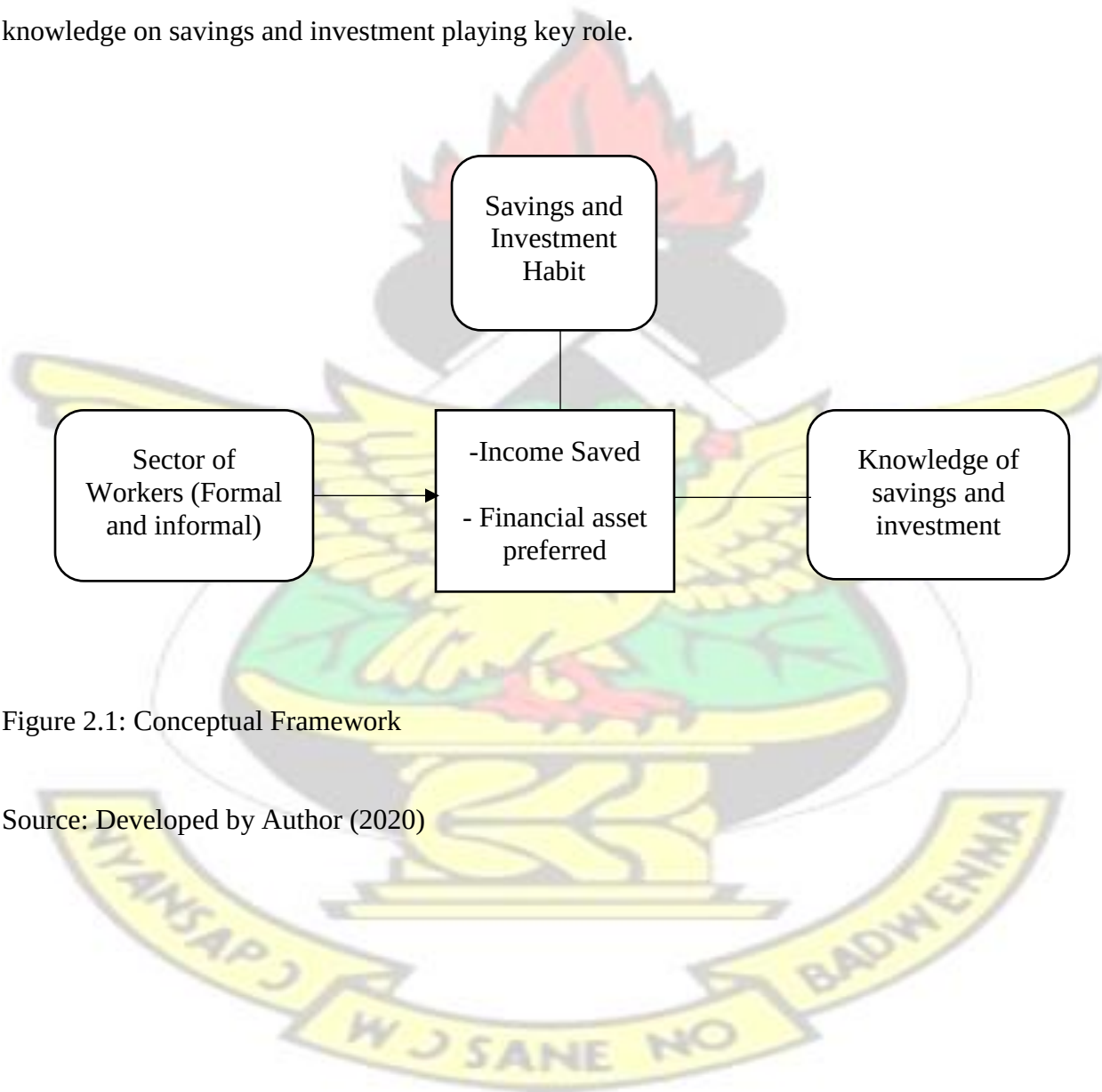


Figure 2.1: Conceptual Framework

Source: Developed by Author (2020)

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 INTRODUCTION

This chapter presents the detailed methodology used to carry out the study. It provides a step-by-step account of the method adopted to execute the study. The first section discusses the research design employed for the study. This is followed by a description of the study population used. The third section gives an overview of the sample size and the sampling technique used to select the sample. Other sections subsequent to the third section are the data collection, data analysis, reliability and validity test, and ethical considerations which were found relevant for the study.

3.1 RESEARCH DESIGN

The study employs the descriptive research since it seeks to describe the habits of workers in two different sectors (formal and informal sectors) towards savings and investment. This is in line with the design used by Assefa and Rao (2018) to study financial literacy and investment behavior of salaried individuals in Ethiopia.

The study also adopts the quantitative approach to research. This approach is used since the study uses quantitative measures to investigate the behaviour of workers towards savings and investment. Similarly, this is in line with the research approach used in similar studies by Donkor and Anane

(2016) who study the saving behaviour of citrus farmers in Ghana and Mak and Ip (2017) who study the investment behaviour of investor, individual investors in India.

Again, the study uses the survey research strategy since it obtains information regarding the study from a large and scattered group of individuals to make conclusions on the phenomenon under study which is consistent with the research strategy employed by some studies in similar respect (Gill et al., 2011; Bhushan, 2014; Donkor and Anane, 2016; Batra and Kumar, 2018).

3.2 POPULATION OF THE STUDY

The population for the study is all formal sector workers as well as informal sector workers in the Asuogyaman District. The total population of workers in the district is estimated at 39,332 people per figures from the Ghana Statistical Service (GSS) 2010 population and housing census. Per the GSS report, the formal and informal sector workers within the district are 8535 and 30796 respectively.

3.3 SAMPLE SIZE AND SAMPLING TECHNIQUE(S)

The sample size for the study is 200 people made up of 100 formal sector workers and 100 informal sector workers which is derived using the sample size determination formula. Based on the sample size determination formula: $n = N/(1+Ne^2)$, where, n = sample size, N = population size, and e = expected error margin, the sample size for the informal and formal sectors workers is computed as follows.

For the informal sector, considering the population of 30796 workers and 10% error margin (i.e. 90% confidence level), the sample size is, $n = 30796 / (1 + 30796 * 0.10^2)$, $n = 99.67 = 100$. Hence, the sample size for the informal sector workers is 100 participants.

For the formal sector, using the population of 8535 workers and 10% error margin, the sample size is, $n = 8535 / (1 + 8535 * 0.10^2)$, $n = 98.84 = 99$. This is then approximated to 100 participants to ensure equal number of respondents for both sectors. Thus, arriving at the total sample size of 200 respondents.

Considering the nature of the study, the cluster sampling technique is employed to group the workers into two clusters of workers (i.e. formal sector workers and informal sector workers), after which the purposive sampling is used to select respondents to avoid bias of selecting respondents from only a particular group of workers. Thus, essentially, the researcher ensured that respondents are selected from at least five categories of professionals or groups for each cluster of workers. For the formal sector workers, respondents are selected from teachers, health workers, accounting and finance professionals, local government personnel, and personnel from other formal sector engagements such as VRA, ATL, Hotels and tourism operators, among others. For the informal sector, respondents are selected from traders, artisans, transport operators, and other relevant groups.

3.4 DATA COLLECTION

Data is collected from only primary source. The research instrument used is the research questionnaire which uses both closed-ended and open-ended questions covering the objectives of

the study. As part of efforts to enhance social distancing and necessary protocol to mitigate the risk of the COVID-19 disease, the researcher employs both online and hardcopy personal administration of questionnaires. The online questionnaire administration is used to obtain data from those who are in a position to fill and return the questionnaire via emails, social media apps, and other relevant online media. For those who needed assistance, two enumerators were detailed to personally administer the questionnaires to them but ensured that the necessary COVID-19 prevention protocols were not compromised.

3.5 DATA ANALYSIS

Employing both the descriptive and inferential analytical techniques, data obtained from the field were organized and sorted to obtain all valid responses. After organizing and sorting the data into analyzable format, the researcher employed the descriptive analytical approach using frequencies, percentages, and means on the first two objective of the study as applicable. Regarding the third and fourth objectives, since they sought to test a hypothesis, the inferential technique of chi square was employed to analyze them. The data analysis was performed with the aid of both SPSS and Excel software.

3.6 RELIABILITY AND VALIDITY OF DATA

Reliability and Validity of data is checked by first conducting pilot testing of research instrument to ensure that it contains the questions which reflect the objectives of the study so that necessary amendments could be made where applicable. In this regard, the researcher tested the validity of the research instrument by undertaking a pilot test on the questionnaire with 40 respondents within

the Madina and Adentan area in Accra after which the necessary editing was done to fine tune all unclear and irrelevant questions.

3.7 ETHICAL CONSIDERATION

As part of efforts to comply with academic integrity, the researcher did not compromise on ethical requirement in conducting the study. First of all, the researcher ensured that questionnaire is designed such that it conceals the identity of the respondents, Thus, ensuring that respondents remain anonymous. Secondly, the researcher ensured that the consent of respondents is sought before proceeding to administer the questionnaire. The researcher also explained to the respondents that information obtained from the field will be held in secrecy and used for the sole purpose of this academic research, which the researcher has duly complied.

3.8 PROFILE OF STUDY AREA

Asuogyaman District was created under local government instrument LI 1431 of 1988 as a result of Ghana Government re-demarcation exercise carried out to operationalize decentralization programme in the country from the defunct Kaoga District, which had Somanya as the capital. The Asuogyaman District has been divided into six Area Councils in line with the provisions of the Local Government Act, 467(1993). They are Anum, Boso, Frankadua/Apeguso, Atimpoku, Gyakiti and Akosombo. The Asuogyaman District is located approximately between latitudes 6° 34° N and 6° 10° S and longitudes 0° 1° W and 0°14E. It is about 120m above Mean Sea Level (MSL). It covers a total estimated surface area of 1,507 sq. km, constituting 5.7 percent of the

total area of the Eastern Region. Afram Plains South District borders the district to the north and the Upper and Lower Manya districts to the south and west.

Volta River Authority and Akosombo Textiles form the major industry employing a major proportion of the population. Major hotels and tourist sites (Volta Hotel, Senchi Royal Hotel, Akosombo Continental Hotel, Afrikiko River Front and Sajuna Beach Park) also contribute to the economy by attracting tourist from all parts of the world. Atimpoku is a major commercial center due to its central location where communities in parts of volta and eastern converge. The predominant “Abollo and One Mouth Thousand” is a common commodity been trade coupled with other small to medium size commercial entities.

The employment sector as derived from the 2010 PHC data indicate that a total of 39,332 employees exist in the Asuogyaman District with private informal sector employing 78.3 percent. They include traders, craftsmanship, small businesses and SMEs. Government and the private formal sector employ the remaining 21.7 percent of the employed population. The government employs 8.3 percent of the employed population with most of them working as teachers, health workers, district assembly workers and other related government agencies.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.0 INTRODUCTION

This chapter presents the detailed analysis of data and relevant discussions. The chapter is composed of six sections. The first section provides the response rate obtained for the study. The second section presents the background information of the respondents. The third section also gives a presentation of the analysis on knowledge of savings and investment among respondents. This is followed by presentation of analysis on the preference and motivation for investment in the fourth section. The fifth section gives the analysis on association between sector of worker and income savings. The last section which is the sixth section also presents the analysis on association between sector of worker and financial asset preference.

4.1 RESPONSE RATE

The total sample size for the study was 200 respondents, made up of 100 respondents each from the formal and informal sector working class. In this regard, 200 questionnaires were sent out. Out of the total of 200 questionnaires sent out, total questionnaires which were validly filled and returned by the respondents were 179, made up of 88 (44%) from formal sector respondents and 91 (45.5%) from the informal sector respondents. This means that the total response rate achieved from the 200 questionnaires sent out is 89.5%.

4.2 BACKGROUND PROFILE OF RESPONDENTS

The background profile of the respondents which were obtained is presented in this section. Basically, the background information obtained on the respondents covers areas such as gender, age, nature of employment, number of years in current work, level of education, and monthly income. These are presented in summary in Table 4.1.

4.2.1 Gender of Respondents

From Table 4.1, it is seen that majority of the respondents were males compared to females. From the table, 99 respondents representing 55% were males whilst 80 respondents representing 45% were females. With the sector specifics, 55(62%) males and 33(38%) were from the formal sector whilst 44(48%) males and 47(52%) females were from the informal sector. This shows that majority of male respondents were from the formal sector whilst majority of the female respondents were from the informal sector. The higher number of male respondents from the formal sector give credence to the gender disparity in formal sector employment.

4.2.2 Age of Respondents

Evidence provided in Table 4.1 shows that respondents who were up to age 30 were 53 representing 30% of total respondents from both formal and informal sectors. Respondents whose ages are between 31 to 40 were 52 representing 29% of total respondents. respondents whose ages are 41-50 years and above 50years were 42(23%) and 32(18%) respectively. The result shows that significant number of respondents were people who were above 30 years. This shows that majority of respondents were people who all things being equal, may be having some level of financial responsibility, hence the higher tendency to affect his/her savings and investment behaviour in dynamic ways.

Table 4.1: Background profile of respondents

	Formal Sector		Informal Sector		Combined	
	Freq.	%	Freq.	%	Freq.	%
Gender						
Male	55	62%	44	48%	99	55%
Female	33	38%	47	52%	80	45%
Total	88	100%	91	100%	179	100%
Age						
Up to 30 years	23	26%	30	33%	53	30%
31-40 years	25	28%	27	30%	52	29%
41-50 years	25	28%	17	19%	42	23%
Above 50 years	15	17%	17	19%	32	18%
Total	88	100%	91	100%	179	100%
Education level						
Up to SHS	9	10%	47	52%	56	31%
Diploma	26	30%	25	27%	51	28%
1st Degree and Above	53	60%	19	21%	72	40%
Total	88	100%	91	100%	179	100%
Nature of employment						
Full time	83	94%	69	76%	152	85%
Part-time	5	6%	22	24%	27	15%
Total	88	100%	91	100%	179	100%
Years in current work						
1-5 years	32	36%	35	38%	67	37%
6-10 years	14	16%	23	25%	37	21%
Above 10 years	42	48%	33	36%	75	42%
Total	88	100%	91	100%	179	100%
Monthly income						
Less than Gh¢1000	12	14%	33	36%	45	25%
Gh¢1000-Gh¢1500	15	17%	18	20%	33	18%
Gh¢1501-Gh¢2000	38	43%	11	12%	49	27%
Above Gh¢2000	23	26%	29	32%	52	29%
Total	88	100%	91	100%	179	100%

Source: Field survey (2020)

4.2.3 Education Level of Respondents

From Table 4.1, the education level of respondents provides that 56 people representing 31% of the total respondents have up to secondary school education. Respondents with diploma as their highest level of education are 51 representing 28% of the respondents. Respondents with at a minimum of bachelor's degree qualification as their highest level of education are 72, representing 40% of the total respondents. It seen that majority of the respondents with degree qualifications are from the formal sector whilst majority of respondents with up to secondary school education were from the informal sector. There is no significant difference in the respondents with diploma qualification between the formal and informal sectors. Nonetheless, it is evident from the above indicators that majority of the respondents have some level of formal education which makes them a bit more enlightened and positions them well to understand and appreciate the nature of the study.

4.2.4 Nature of Employment

It is seen in Table 4.1 under the nature of employment that 152 respondents representing 85% of the total respondents are full time workers in the kind of work they are engaged in. Respondents who are part-time and are not engage in full time in what they do currently are 27 representing 15% of the total respondents. Majority of the full-time workers are from the formal sector (i.e. 83 compared to 69 from the informal sector) whilst majority of the part-time workers are from the informal sector (i.e. 22 compared to 5 from the formal sector). The high number of full-time workers shows that most of the respondents for the study have work that they do which provide them with a reliable stream of income. Thus, making them potential candidates to engage savings and investment which form the crux of the study.

4.2.5 Years in Current Employment

Evidence from Table 4.1 indicates that 67 respondents representing 37% of the total respondents have been engaged in their current employment between 1-5 years. It is also seen that 37 respondents representing 21% have worked in their present work between 6-10 years whilst 75 respondents representing 42% have worked in their current work for more than 10 years. It is interesting to note from the above that majority of the respondents representing more than 60% have worked in the present job for at least 6 years. This shows that the respondents have a stable job which provides them reliable periodic income. Therefore, all things being equal, the propensity for the respondents to undertake some sort of savings and investment is high which makes them suitable for the study.

4.2.6 Income of Respondents

It is seen from Table 4.1 that 45 people representing 25% earn less than Gh¢1000 on a monthly basis. Respondents who earn between Gh¢1000-Gh¢1500 are 33 representing 18%. Again, it is evident that respondents who earn above Gh¢1500 to Gh¢2000 are 49, representing 27% of total respondents. Respondents who earn above Gh¢2000 are 52 representing 29% of total respondents. It is seen that majority of the respondents are people who earn above Gh¢1000. The number of respondents who earn less than Gh¢1000 and between Gh¢1501-Gh¢2000 differ significantly between the formal and informal sectors, that of respondents who earn between Gh¢1000-Gh¢1500 and above Gh¢2000 do not differ substantially among the two sectors.

4.3 KNOWLEDGE ON SAVINGS AND INVESTMENT

This section presents the analysis on the knowledge of savings and investment among the formal and informal sector workers as required by the first objective of the study. In doing this, the study adopted some questions to test respondent's knowledge on savings and investment from the work of Mireku (2015) and modified them to suit the context of the current study. In this regard, respondents were provided with options of answers to the questions which involved correct and incorrect answers, as well as a don't know answer. The don't know answer was added to prevent respondents from guessing the accurate answer even if the respondent do not know as used by some schools of thought such as Mireku (2015) and Lusardi and Mitchell (2006). To conclude on the extent of knowledge on savings and investment, the study adopted the procedure used by Mireku (2015) where respondents were group into low, medium, and high levels of knowledge on savings and investment when percentage mean score of correct answer was below 60%, 60-79%, and above 80% respectively.

4.3.1 Knowledge on Savings

From Table 4.2, it is seen that five items were used to test respondents' level of knowledge on savings. It is found that 64.8% of respondents in the formal answered correctly on whether savings is the same investment whilst 47.3% of respondents in the informal sector answered correctly on same. Respondents who provided incorrect answers on savings equal to investment were 23.9% and 33% for formal and informal sector respectively. Those who gave a don't know answer were 11.4% and 19.8% in formal and informal sector respectively. It is seen here that most of the respondent are knowledgeable on whether or not savings is equal to investment in the formal sector but the opposite is the case in the informal sector.

Table 4.2: Knowledge of savings and investment among workers

Indicators	Formal Sector			Informal Sector		
	Correct Answer	Incorrect Answer	Don't Know Answer	Correct Answer	Incorrect Answer	Don't Know Answer
Savings knowledge						
Savings equal to investment	64.8	23.9	11.4	47.3	33.0	19.8
True statement about savings	55.7	30.7	13.6	49.5	34.1	16.5
Most interest paying account	75.0	17.0	8.0	74.7	16.5	8.8
Savings account interest p.a.	52.3	44.3	3.4	44.0	46.2	9.9
Mechanisms or medium for savings	58.0	31.8	10.2	59.3	26.4	14.3
Mean percentage score	61.1			54.9		
Investment knowledge						
Trading of shares	48.9	47.7	3.4	35.2	47.7	20.5
Short term investment	71.6	23.9	4.5	54.5	33.0	15.9
Likelihood of losing all investment in single stock	54.5	27.3	18.2	58.0	30.7	14.8
High risk high return	62.5	26.1	11.4	65.9	28.4	9.1
Examples of financial investment asset	78.4	15.9	5.7	55.7	39.8	8.0
Mean percentage score	63.2			53.9		

Source: Field survey (2020)

It is found that 55.7% of respondents in the formal sector were able to provide correct answers when quizzed to identify some true statements about savings as against 49.5% of respondents who were able to provide correct answers on same in the informal sector. Respondents who provided incorrect and don't know answers when quizzed on the correct statement of savings were 30.7% and 13.65 respectively in the formal sector whilst those who provided incorrect and don't know answers were 34.1% and 16.5% respectively in the informal sector. This shows that whilst 55.7%

of formal sector workers could correctly identify some true statements about savings, a little below 50% of informal sector workers could correctly identify same.

On question on the most interest paying account, 75%, 17%, and 8% of respondents in the formal sector provided correct, incorrect, and don't know answers respectively. With regards to the informal sector, 74.7%, 16.5%, and 8.8% provided correct, incorrect, and don't know answers respectively. This shows that significant number of respondents in both the formal and informal sectors are knowledgeable on the account that pays the most interest.

On testing the knowledge of respondents on how to accurately predict the interest on savings account per annum, 52.3% and 46.2% of respondents answered correctly in the formal and informal sectors respectively. Those who provided incorrect and don't know answers in the formal sector were 44.3% and 3.4% respectively. For the informal sector, those who provided incorrect and don't know answers were 46.2% and 9.9% respectively. This means that majority of respondents in the formal sector, representing 52.3% are knowledgeable on how to accurately compute and predict the interest on savings account as compared to those in the informal sector where 44% are knowledgeable in that.

On the mechanisms or medium for saving money, 58%, 31.8, and 10.2% of respondents in the formal sector gave correct, incorrect, and don't know answers respectively. Responses obtained from the informal sector shows 59.3%, 26.4% and 14.3% of respondents gave correct, incorrect, and don't know answers respectively. This shows that most of the respondents in both the formal and informal sectors are knowledgeable on the mechanisms or medium to save money.

The mean percentage score of correct answers for the five savings indicators used to test respondents' knowledge on savings shows 61.1% and 54.9% for the formal and informal sector respectively. This shows that the formal sector workers have medium level of knowledge on savings compared to the informal sector workers who are found to have low level of knowledge on savings.

4.3.2 Knowledge on Investment

Just like the savings, five items were used to test the level of knowledge of respondents on investment which is analyzed and presented in Table 4.2. On the medium where shares are traded in Ghana, 48.9% of respondents in the formal sectors answered correctly, 47.7% answered incorrectly, and 3.4% answered don't know. Responses from the informal sector shows that 35.2% of respondents answered correctly, 47.7% answered incorrectly, and 20.5% answered don't know. It is revealed from the above that majority of respondents in both formal and informal sectors are not knowledgeable on where share are traded in Ghana.

On which investment asset is a short-term investment, 71.6%, 23.9%, and 4.5% of respondents in the formal sector provided correct, incorrect, and don't know answers. Respondents in the informal sector who provided correct, incorrect, and don't know answers were 54.5%, 33%, and 15.9% respectively. This shows that majority of workers in both formal and informal sectors are knowledgeable on the investment asset that is a short-term investment product.

When quizzed on the possibility of losing all funds in a single stock compared to wider range of stocks, 54.5% of respondents in the formal sector answered correctly whilst 27.3% and 18.2%

gave incorrect and don't know answers respectively. Responses obtained from informal sector workers show that 58%, 30.7%, and 14.8% of respondents gave correct, incorrect, and don't know answers respectively. This means that majority of respondents in both formal and informal sectors are fairly knowledgeable on the need to diversify their investment to mitigate the risk of losing all funds tied up in single stock.

On whether or not high risks assets provide high returns, majority of respondents in the formal sector representing 62.5% answered correctly, 26.1% answered incorrectly, and 11.4% gave a don't know answer. Respondents who gave correct answer in the informal sector were 65.9% whilst 28.4% and 9.1% gave incorrect and don't know answer. This provides evidence that majority of respondents in both sectors are knowledgeable that high risk investment assets offer high return and vice versa.

When asked to identify some examples of financial investment assets among some listed items, majority of respondents from the formal sector representing 78.4% gave correct answers. Incorrect and don't know answers were given by 15.9% and 5.7% of the respondents in the formal sector. with respect to the informal sector, 55.7%, 39.8, and 8.0% of respondents gave correct, incorrect, and don't know answers. This shows that significant number of respondents in both sectors could identify correctly the financial investment assets presented to them, signifying a fairly good knowledge of financial investment products.

The mean percentage score of the various investment indicators shows that the formal sector obtained a mean score of 63.2% compared to the informal sector which scored 53.9%. This is

suggestive that workers in the formal sector have medium level of knowledge as against those in the informal sector who are found to possess low level of knowledge on investment matters.

4.4 PREFERENCE AND RATIONALE FOR INVESTMENT

This section of the chapter presents the analysis and discussion on respondents' preference of investment and the rationale for investing as required by the second objective of the study. The result from information obtained from the field survey are presented in Table 4.3 which is used as the basis for the analysis.

4.4.1 Preference of Investment Among Workers

In Table 4.3, the financial investment preference of workers is presented. It is found that out of the total respondents of 179, 141 representing 79% answered in the affirmative that they engage in investment which is a good pre-condition for identifying their investment preference and rationale for investing. The 38 people representing 21% observed indicated they do not engage in any form of financial investment. It is revealed in Table 4.1 that 51 people representing 36% of those who actively invest in financial investment assets prefer and invest in treasury bills. Again, it is seen that 45 people representing 32% prefer and invest in secured or fixed deposits. Per the result in Table 4.3, 21 people representing 15% prefer and invest in shares. The remaining 17% of respondents constitute those who prefer mutual funds, bonds, and pension schemes.

It is found that significant number of respondents constituting more than 50% prefer treasury bills and secured deposits. This may be due to the low level of risk associated with these types of

financial investment compared to other relatively high-risk stock of investment assets. This depicts that majority of the respondents are risk averse to financial investment risks for reasons best known to them.

Table 4.3: Responses on Savings and Investment Habit of Workers

Variable	Type	Formal Sector		Informal Sector		Combined	
		Freq.	%	Freq.	%	Freq.	%
Savings	Yes	81	92%	79	87%	160	89%
	No	7	8%	12	13%	19	11%
Total		88	100%	91	100%	179	100%
Monthly Savings	<Gh¢500	21	26%	32	41%	53	33%
	Gh¢500- Gh¢1000	38	47%	29	37%	67	42%
	>Gh¢1000	22	27%	18	23%	40	25%
Total		81	100%	79	100%	160	100%
Investment	Yes	73	83%	68	75%	141	79%
	No	15	17%	23	25%	38	21%
Total		88	100%	91	100%	179	100%
Financial Investment Preference	Secured deposit	22	30%	23	34%	45	32%
	Pension scheme	5	7%	2	3%	7	5%
	Bonds	7	10%	0	0%	7	5%
	Shares	9	12%	12	18%	21	15%
	Mutual	10	14%	0	0%	10	7%
	Treasury bill	20	27%	31	46%	51	36%
Total		73	100%	68	100%	141	100%

Source: Field Survey (2020)

4.4.2 Motivation for Investing by Workers

The motivation for investing is presented in this sub-section. Here, respondents were made to indicate the extent of agreement or otherwise how some major factors motivate them to invest on

a Five-point Likert Scale where 1 means strongly disagree and 5 means strongly agree. The responses obtained from the 141 respondents who answered in the affirmative that they engage in investment have been analyzed using descriptive statistics of mean and standard deviation and ranked based on the mean score for each factor.

From Table 4.4, the result show that people invest mainly to buy asset (M=4.23, SD=0.86), to grow wealth (M=3.94, SD=1.06), and for retirement or old age security (M=3.79, SD=0.99). It is revealed further that workers invest to provide for children's needs (M=3.74, SD=0.94), for precautionary reasons (M=3.51, SD=0.97), and to protect money from inflation (M=3.42, SD=1.03). The analysis of the factors suggests that the most dominant motivation for investing in financial assets by workers is to enable them mobilize funds to buy real asset which ranked first among all the factors. Again, the desire for workers to grow wealth emerged as the second most dominant motivating factor which pushes workers to invest in financial assets whilst the third most dominant motivating factor found is to provide security and financial independence during retirement or old age.

Table 4.4: Motivations for investing

Item	N	Mean	SD	Rank
To buy asset (e. landed property)	141	4.23*	0.86	1
To growth wealth	141	3.94*	1.06	2
For retirement/old age security	141	3.79*	0.99	3
For children's needs	141	3.74	0.94	4
For precautionary reasons	141	3.51	0.97	5
To safeguard money against inflation	141	3.42	1.03	6

Source: Field Survey (2020)

4.5 ASSOCIATION BETWEEN SECTOR AND INCOME SAVED

In this section, an analytical test of independence is performed to establish whether or not there is an association between the sector (formal and informal) in which a person works and the amount of income saved on a periodic basis from the disposable income of the person which is the requirement for the third objective of the study. In this regard, a chi square test is performed to establish if there is an association or otherwise.

Table 4.5: Cross Tabulation for Sector and Amount of income saved

	Observed (Actual) Frequency			Total
	<Gh¢500	Gh¢500-Gh¢1000	>Gh¢1000	
Formal Sector	21	38	22	81
Informal Sector	32	29	18	79
Total	53	67	40	160
	Expected Frequency			Total
	<Gh¢500	Gh¢500-Gh¢1000	>Gh¢1000	
Formal Sector	26.83	33.92	20.25	81
Informal Sector	26.17	33.08	19.75	79
Total	53	67	40	160
Chi2	3.868			
Critical value	5.991			
df	2			
P value	0.1446			

Sig. level @5%.

From Table 4.5, it is seen that the calculated chi square (chi2) value is 3.868 [df = 2, p-value = 0.1446] whilst the critical chi square value is 5.991 [df = 2, sig.=0.05]. Based on the result of the chi square test, the calculated chi square value of 3.868 is less than the critical chi square value of 5.991 (alternatively, p-value = 0.1446 > α = 0.05), hence there is no strong evidence to reject the null hypothesis (i.e. we fail to reject the null hypothesis). It is inferred from the outcome of the test

that there is no significant association between the sector in which a person works and the amount of income saved from his/her disposable income.

4.6 ASSOCIATION BETWEEN SECTOR AND PREFERRED INVESTMENT ASSET

In this section, an analytical test of independence is performed to establish whether or not there is an association between the sector (formal and informal) in which a person works and the preference for financial investment asset which is the requirement for the fourth objective of the study. In this regard, a chi square test is performed to establish if there is an association between sector and financial asset preference or otherwise.

Table 4.6: Cross Tabulation for Sector and Financial investment asset preference

Observed (Actual) Frequency							
	Secured deposit	Pension scheme	Bonds	Shares	Mutual fund	Treasury bill	Total
Formal Sector	22	5	7	9	10	20	73
Informal Sector	23	2	0	12	0	31	68
Total	45	7	7	21	10	51	141
Expected Frequency							
	Secured deposit	Pension scheme	Bonds	Shares	Mutual fund	Treasury bill	Total
Formal Sector	23.30	3.62	3.62	10.87	5.18	26.40	73
Informal Sector	21.70	3.38	3.38	10.13	4.82	24.60	68
Total	45	7	7	21	10	51	141
Chi2	20.958						
Critical value	11.070						
df	5						
P value	0.0008						

Sig. level @5%

From Table 4.6, it is seen that the calculated chi square (chi2) value is 20.958 [df = 5, p-value = 0.0008] whilst the critical chi square value is 11.070 [df = 5, sig.=0.05]. Based on the result of the chi square test, the calculated chi square value of 20.958 is greater than the critical chi square value of 11.070 (alternatively, p-value = 0.0008 < α = 0.05), hence, there is a strong evidence to reject the null hypothesis (i.e. we reject the null hypothesis and accept the alternate hypothesis). The result provide evidence that there is a significant association between the sector in which a person works and the preference for financial investment asset.

4.7 DISCUSSION OF FINDINGS

4.7.1 Knowledge of Savings and Investment

With respect to knowledge on savings, the study found that the mean percentage score of correct answers for the five savings indicators used to test respondents' knowledge on savings shows 61.1% and 54.9% for the formal and informal sector respectively. This shows that the formal sector workers have medium level of knowledge on savings compared to the informal sector workers who are found to have low level of knowledge on savings. The outcome of medium knowledge on savings is consistent with the result of the study by Mireku (2015) which identified medium level of knowledge on savings among university students in Ghana. Further the result agrees with the work of Mabula and Dongping (2019) which revealed medium savings knowledge among study participants, although their work focused on SME managers. Contrastingly, the outcome on savings knowledge among workers in the informal sector does not support the result reported by Mireku (2015) and Mabula and Dongping (2019). However, it agrees with Millar and Devonish (2009) and Suppakitjarak and Krishnamra (2015) which reported low knowledge on savings among workers in Barbados and Thailand respectively.

Regarding the knowledge of respondents on investment, the study found that the mean percentage score of the various investment indicators shows that the formal sector obtained a mean score of 63.2% compared to the informal sector which scored 53.9%. This is suggestive that workers in the formal sector have medium level of knowledge as against those in the informal sector who are found to possess low level of knowledge on investment matters. The outcome of investment knowledge of formal sector workers contradicts the result of the study by Mireku (2015) where respondents were found to have low knowledge on investment products, risks, and diversification. The outcome on formal sector workers further disagrees with the finding from the work by Zuraina (2018) where investment knowledge was found to be low among study participants. The outcome also does not support the findings from studies by authors such as Van Rooij et al. (2011) and Volpe et al. (1996). Unlike the case of formal sector workers, the outcome on informal sector workers where low level of investment knowledge is found is consistent with the studies by Mireku (2015), Zuraina (2018), and Volpe et al. (1996) which revealed low knowledge on investment among respondents. However, it is important to indicate that unlike the current study which focused on workers, the study by Mireku, Zuraina, and other authors above focused on university and college students.

4.7.2 Preference and Motivation for Investment

With respect to the respondents' preference of investment, the study found that significant number of respondents constituting more than 50% prefer treasury bills and secured deposits. This may be due to the low level of risk associated with these types of financial investment compared to other relatively high-risk stock of investment assets. This depicts that majority of the respondents are risk averse to financial investment risks for reasons best known to them. This outcome supports

the result of the study carried out in Ethiopia by Assefa and Rao (2018) which revealed that workers significantly prefer to invest in tradition and safe financial products like government bonds rather than comparatively more risky assets which offer higher return. The outcome also agrees with the finding obtained by Suppakitjarak and Krishnamra (2015) in their which revealed that people prefer to invest in financial assets like the secured deposit which is seen as less risky compared to other marketable securities. However, although the outcome agrees with Hunjra (2019) which reported that workers tend to be risk averse and invest in less risky assets, the authors documented that workers have higher preference for real estate assets compare to the marketable financial assets.

In relation to the workers' motivation for investing, the study found that the most dominant motivation for investing in financial assets by workers is to enable them mobilize funds to buy real asset which ranked first among all the factors. Again, the desire for workers to grow wealth emerged as the second most dominant motivating factor which pushes workers to invest in financial assets whilst the third most dominant motivating factor found is to provide security and financial independence during retirement or old age. This outcome disagrees with the finding from the study by Addai, Gyimah, and Owusu (2017) which revealed that the most paramount factor which motivate people to invest is to provide for their children's needs. The result also contradicts the outcome of the finding from a study pursued in Thailand by Suppakitjarak and Krishnamra (2015) which discovered retirement security as the most principal objective which motivate people to invest.

4.7.3 Association Between Workers' Sector and Amount Saved

The study found that there is no significant association between the sector in which a person works and the amount of income saved from his/her disposable income. This result is consistent with the outcome of a study by Cilasun (2009) where it emerged that the sector in which the key members of a household are employed plays a major role in the proportion of income savings. The result further agrees with another study conducted in Botswana by Matenge, Makgosa, and Mburu (2019) revealed that formal and informal sector employment plays significant role in determining the level of income savings. In sharp contrast with the above outcomes, Geetha and Ramesh (2011) found in their study that there is no significant association between the proportion of disposable income saved and among formal and informal sector workers.

4.7.4 Association Between Workers' Sector and Amount Saved

The study found evidence that there is a significant association between the sector in which a person works and the preference for financial investment asset. This suggest that the sector within which a person is engaged greatly influences the type of financial asset the person invest in. Thus, indicating that financial investment preference of formal sector workers differs from that of informal sector workers. The difference in financial investment preference could be as a result of the difference in their level of knowledge on investment where formal sector workers are found to possess medium level of investment knowledge compared to those in the informal sector who are found to possess low knowledge on investment. This result is consistent with the outcome of a study by Assefa and Rao (2018) which revealed a strong association between worker's sector of engagement and preference for financial investment products. The finding also supports the result of a study by Parihar and Sharma (2012) which found an existence of strong relationship between

an individual's sector of engagement and investment options. However, in contrast, the result disagrees with the finding of studies by Shanmugasundaram and Balakrishnan (2011) Horvarth and Zuckerman (1993) which revealed no significant relationship between people's sector of employment and investment preference.



CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.0 INTRODUCTION

This chapter is the last chapter of the thesis report. Basically, it is made up of four sections. The first section is the summary of the findings which emerged from the study. The second section is the conclusion which provides the general conclusion of the study based on the results which emerged from the study. The third section is also the presentation of recommendations for policy consideration following the outcome of the study. The last section presents recommendations to guide future studies which may be related to the current study.

5.1 SUMMARY OF FINDINGS

The central aim of this study is to examine the savings and investment knowledge and habits of formal and informal sector workers in Ghana with emphasis on workers in the Asuogyaman District. To narrow the focus of the study, four specific objectives were carved to direct the study. The first objective sought to ascertain the knowledge on savings and investment among formal and informal sector workers. The second objective sought to identify the preference and motivation for investment among formal and informal sector workers. The third objective sought to establish if the sector in which workers are engaged has an association with the amount of money saved from disposal income whilst the fourth objective also sought to determine if the sector in which workers are engaged has an association with preference of financial investment products/assets.

In respect of the first objective of the study which is to ascertain the knowledge on savings and investment of formal and informal sector workers, it is found from the means percentage score of correct responses that workers in the formal sector have medium level of knowledge on savings whilst workers in the informal sector have low level of knowledge on savings. It is again discovered that workers in the formal sector possess medium knowledge on investment related matters compared to workers in the informal sector who possess low knowledge on investment issues.

On the second objective of the study which is to identify the preference and motivation for financial investment, is found that significant number of workers in both formal and informal sectors constituting more than 50% prefer treasury bills and secured deposits as compared to other financial assets which may be due the low level of risk associated with these types of financial assets. Thus, indicating that majority of the respondents who participated in the study have high risk aversion. The study also finds that the three most dominant motivating factors for investing in financial assets by workers include: to enable the workers mobilize funds to buy real asset, the desire for workers to grow wealth, and to provide security and financial independence during retirement or old age.

Regarding the third objective of the study which is to establish if there is an association between the sector in which a person is working and the amount of money saved from disposable income, the study finds that there is no statistically significant association between the sector in which a person works and the amount of income saved from his/her disposable income.

With respect to the fourth objective which is to establish if there is an association between the sector in which a person is working and preference for financial investment asset, it is revealed based on evidence obtained that there is a significant association between the sector in which a person works and the preference for financial investment asset, which suggests that the sector within which a person is engaged greatly influences the type of financial asset the person invests in.

5.2 CONCLUSION

The study sought to investigate the savings and investment knowledge and habits of formal and informal sector workers with particular focus on workers in the Asuogyaman District. To achieve the set objectives, the study employed the quantitative approach based on the descriptive survey design and obtained primary data from sample size of 200 workers. The dataset was analyzed using descriptive analysis of frequency, percentages, and means as well as inferential analysis of chi square test. The study establishes that formal and informal sector workers possess medium and low levels of knowledge respectively on both savings and investment. It is also discovered that workers prefer low risk investment assets namely treasury bills and secured deposits to other high-risk marketable securities. It is again found that workers are predominantly motivated to invest in order to buy real assets, to grow wealth and to safeguard financial independence on retirement. The study establishes that there is no significant association between the sector of worker and amount of money saved from disposable income but a significant association is found between the sector of worker and the preference for financial investment assets. On the basis of these outcomes, the study concludes that workers in the formal sector may be at pole position to having more exposure to financial issues compared to those in the informal sector, thus the disparity in level of

knowledge on savings and investment. The study also concludes that workers have high aversion for risk, hence prefer less risk assets compared to high-risk marketable securities. Again, the study concludes that, although sector do not influence the level of savings by workers, it has influence on preference for financial asset which may be due to the disparity in level of knowledge possessed by workers in the two extremes.

5.3 RECOMMENDATION FOR POLICY CONSIDERATION

The recommendation made based on the findings of the study to help policy consideration are as follows.

1. It is emerged from the study that formal sector workers possess medium knowledge on savings and investment whilst informal sector workers possess low knowledge on same. On the basis of this finding, it is recommended that policy makers and relevant stakeholders such as banks, trade unions, etc. step up programmes to enhance financial literacy. Especially with the informal sector, there can be tailored made financial literacy programmes for various trade associations to boost their knowledge on financial matters, especially on savings and investment which is very critical for enhancing capital accumulation for use by deficit units in the country.
2. It is also revealed from the study that workers predominantly prefer to invest in low-risk financial assets like treasury bills (government bond) and secured deposits although investment in these less risk assets offers low returns. The reason may not necessarily be due to risk but for purposes of convenience due to the widespread of bank branches everywhere which makes people think it is inconvenient to invest in other financial assets. Therefore, it is recommended that

financial institutions that deal in other financial instruments enhance their selling channels to make it more attractive for people to reach out to the capital market. With the current wave of technological advancement, financial institutions may leverage on technology to achieve this feat.

5.4 RECOMMENDATIONS FOR FURTHER STUDIES

The following recommendations are given to help guide future research which may be related to the current subject of investigation.

1. It is recommended that future studies may launch investigation into the comparison of determinants for savings and investment in formal and informal sectors in Ghana.
2. It is recommended that future research investigate the influence of macro-economic conditions on the savings and investment practices of workers, either in the formal or the informal sector.
3. It is also recommended that future studies may narrow down the scope of the current study and delve deeper into examining the savings and investment behaviour among different class of workers in either the formal sector or the informal sector.

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APPENDIX

KNUST

QUESTIONNAIRE FOR DATA COLLECTION

Dear Respondent,

I am conducting a research on the topic “**Exploring the savings and investment knowledge and habits of formal and informal sector workers in Ghana: Evidence from Asuogyaman District**”. This study is being conducted as part of the requirements for the award of a Master of Science Degree in Accounting and Finance from the Kwame Nkrumah University of Science and Technology. I would be grateful if you could participate in this study by responding to the questions below. This is strictly an academic exercise. Kindly note that the confidentiality of information you provide is highly assured. Please, respond by ticking or writing as applicable. I am most grateful for your participation.

Yours sincerely,

Seth Ansah

Tel:

Sector of Employment (please tick in the corresponding box)	Formal Sector	
	Informal Sector	

Section A: General Information

- 1 Gender: a. Male () b. Female ()
- 2 Age: a. Below 30 years () b. 31 – 40 years () c. 41- 50 years () d. > 50 years ()
- 3 Educational Background: a. None () b. Up to SHS () c. Diploma () d. First Degree ()
e. Second Degree () f. Others (please specify)
- 4 Current employment status: a. Full time () b. Part-time ()
- 5 Years of work in present employment: a. 1 – 5 years () b. 6 – 10 years () c. More than 10 years.
- 6 What is your average monthly income? a Less than Gh¢1000 b. Gh¢1000 – Gh¢1500 c. Gh¢1501 - Gh¢2000 d. Above Gh¢2000.

Section B: Knowledge on Savings and Investment

Part I: Knowledge on Savings

7. Savings is equal to investment?
 - a. True
 - b. False
 - c. Don't know
8. Which of the following statement is true about savings?
 - a. Savings is how much money you have in your bank account
 - b. Savings is the excess of disposable income after deducting consumption expenditure

- c. Savings is the part of investment earmarked for child's school fees
- d. Savings is the total amount of money you have at home
- e. Don't know

9. Which account pays the most interest?

- a. Fixed Deposit
- b. Savings Account
- c. Current Account
- d. Don't Know

10. Assuming you had a GH¢200 in a savings account and the interest rate was 10 percent per year, how much do you think you will have the account after a year?

- a. Greater than Gh¢220
- b. Exactly Gh¢220
- c. Less than Gh¢220
- d. Exactly Gh¢200
- e. Don't know

11. Which of the following is a mechanism or medium for saving money?

- a. Bank
- b. Susu collectors
- c. Money box at home
- d. Buying groceries in advance of upcoming Christmas
- e. Don't know

Part II: Knowledge on Investment

12. In Ghana, listed/issued shares are traded on the

- a. Bank of Ghana
- b. Ghana stock exchange
- c. Securities and exchange commission
- d. Ghana investment Market
- e. Don't Know

13. Which of these is a short-term investment?

- a. Shares
- b. Treasury Bills
- c. Bonds
- d. Mortgage
- e. Don't Know

14. It is less likely to lose all your money if you invest in a single stock (shares) compared to investing the money in a wide range of stocks (shares).

- a. True
- b. False
- c. Don't Know

15. If an investment offers a very high return, it is likely to be of high risk.

- a. True
- b. False
- c. Don't Know

16. Which of the following is a financial investment asset?

- a. Shares

- b. Mutual fund
- c. Treasury bill
- d. Real Estate
- e. Don't know

KNUST

Section C: Savings and Investment Habits of Workers

17. Do you engage in savings? a. Yes () b. No ()
18. If NO, what is the reason
19. If YES, How much do you save in a month? a Less than Gh¢500 () b. Gh¢500 – Gh¢1000
c. Above Gh¢1000 ().
20. Do you engage in financial investment? a. Yes () b. No ()
21. If NO, what is the reason?
22. Which of the following financial investment assets is your most preferred asset that you actively invest in?

Investment Options	
Secured Deposits (Fixed Deposits)	
Pension schemes	
Bonds / Debentures	
Equity Shares	
Mutual funds	
Treasury bills	

23. What is your motivation for investing in financial asset? Kindly indicate the extent to which you agree or disagree that the following reasons motivate you to invest using the scale of 1-5, where 1 = Strongly Disagree and 5 = Strongly Agree

	1	2	3	4	5
To safeguard money against inflation					
To buy asset e.g.: landed property, equipment					
To grow wealth (better financial security)					
For Retirement security					
For children's needs					
For precautionary purpose					
Others (please specify)					

End of Questionnaire

Your participation is highly appreciated

KNUST

